

A STUDY OF SELECTED OKLAHOMA SECONDARY SCHOOL
BUSINESS TEACHERS' READING PREFERENCES
ACCORDING TO TYPES OF ARTICLES
SUMMARIZED FROM BUSINESS
EDUCATION PERIODICALS

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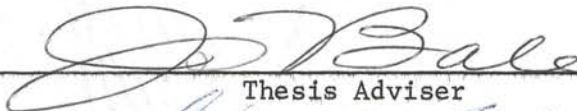
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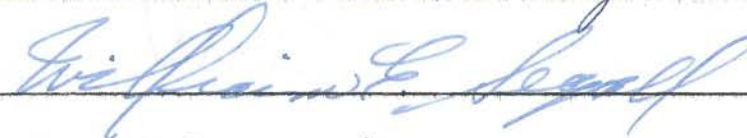
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CHAPTER I

INTRODUCTION

The amount of published materials available in the form of periodicals related to education fill the libraries of colleges and universities. This is not just a recent happening as twenty years ago Gaylord Morrison stated, "Probably no other professional field has as much literature to be read as the profession of education,"¹ Even when the field is limited to business education the professional publications are numerous.² The business educator is faced with volumes of periodicals concerning research, other teachers' ideas and methods, teaching aids and materials, and various other educational information. With our fund of knowledge increasing at the rapid pace of today, an individual has difficulty keeping current with developments in even a small segment of any particular field of study.³

Even though it is difficult and does take a planned effort on the part of the teacher, it seems essential that he make the effort to keep

¹Gaylord D. Morrison, "Professional Readings," Clearing House, XXVII (October, 1952), p. 101.

²C. A. Nolan, Carlos D. Hayden, and Dean R. Malsbary, Principles and Problems of Business Education (Cincinnati, 1967), p. 613.

³John Russell Shinpoch, "A Status Study of Biology Teachers in the Public Secondary Schools of the State of Oklahoma" (Unpub. Ed.D. dissertation, Oklahoma State University, 1967).

current with educational developments, Conley made the point in this manner,

Because of the rapid expansion of knowledge and because of the technical developments in education no one in the field remains on a plateau. He either improves or retrogresses.⁴

Due to the importance of a teacher improving professionally, the choosing of a limited number of periodicals to keep him abreast of current educational developments in his field would appear to be an important task of any business educator's professional life.

From these periodicals which a business educator might select for professional reading, it would seem likely that he would prefer to read certain articles as opposed to others. The type of article business teachers prefer to read could provide useful information for the writers and editors of business education periodicals as well as for educators.

The Need for the Study

H. L. Forkner stated the need for research concerning professional publications and their influence on business teachers and their teaching practices.⁵ It would seem that research is needed to determine if business education periodicals are conveying to teachers the new and rapidly expanding knowledge so vital to the students' welfare. It is, after all, the student who eventually does or does not receive the benefits

⁴William H. Conley, "Reading for Professional Growth," Catholic School Journal, LXIV (February, 1964), p. 6.

⁵Harry Huffman, "Crucial Areas of Research in Business Education," National Business Education Quarterly, XXX (March, 1962, p. 20,

from our increasing educational research. Houghton stresses the need for effective communication of educational research to teachers and administrators.

The question of the capacity of teachers and administrators to digest a large, varied and widespread body of new knowledge and thinking raises a wider issue--that of communication. In what ways and through what channels can new information best be interpreted, expressed and transmitted to teachers and administrators so that it is readily comprehensible and its applicability to concrete situations clearly seen?⁶

Are business education periodicals transmitting the new knowledge to business teachers in such a way as to achieve the goals of comprehension and applicability? This has been taken for granted as the literature does not indicate that business teachers' thoughts and ideas concerning their professional reading preferences have been sought.

For several years various educators and writers have asserted that the periodicals do not meet the needs of the teachers. In 1942, Lafferty said, "One of the criticisms of education periodicals was that the materials published do not represent the needs and interest of teachers."⁷

Morgan, in 1948, implies that many articles are worthless, with tongue in cheek--but not too far--he suggests we should label the articles to help the teacher decide what is worth taking the time to read.⁸ It would seem that a more positive approach would be to make an

⁶W. F. Houghton, "Local Education Authorities and Research," Educational Research, IX (September, 1966), p. 9.

⁷H. M. Lafferty, "Teachers Look at Their Professional Reading," New York State Education, XXIX (June, 1942), p. 672.

⁸Raymond W. Morgan, "Let's 'Grade Label' Our Professional Literature," Business Education World, XXIX (September, 1948), pp. 36-37.

effort to find out what the teachers need and prefer to read in the periodicals and then try to meet these needs and preferences.

Balow concluded from his findings, in 1961, that neither general nor professional education presently influences the reading interests of teachers. He asks, "Why not?"⁹ One possible answer to the question could be hidden in the types of articles the readers prefer.

While talking about journals, magazines, and periodicals published by specialized groups, Lauwerys commented,

In a word, one finds good sound, practical advice, which can easily be used and applied by any teacher anywhere in his ordinary everyday work in the classroom. It is to such little bits of information that most classroom teachers turn in the first instance. Later on, if time allows, they turn to articles of 'general interest' which serve only to enrich their background of their own subject.¹⁰

Lauwerys concludes that in fact teachers and educators do not read nearly as much as some of their other colleagues in other professions. He states that we have, on the one hand, a lack of really readable and worthwhile authors, and on the other, a public unused to serious reading and unprepared to make the efforts needed. The result is a dearth of truly worthwhile publications in the field of education. Lauwerys queries how can the situation be improved? He answers this question himself. He alleges that to begin with, it seems probably that we should pay at least as much attention to the felt needs of the different publics we aim at as is paid by advertisers and by the editors of newspapers--we should do market research. And, we should note very carefully

⁹Bruce Balow, "Magazine Reading Among Teachers and Prospective Teachers," Journal of Teacher Education, XII (March, 1961), p. 58.

¹⁰J. A. Lauwerys, "Definition and Goals of Professional Reading," Phi Delta Kappan, XXXVIII (June, 1957), p. 365.

the different needs and preferences of different levels of the teaching profession--for the greatest differences between the highest and lowest levels here are very much greater than, for example, in medicine or law.¹¹

Krebs, in 1960, also declares that teachers neglect their professional literature largely because much of it is not worthwhile. "This means that a need exists for a form of market research among educators. Decide what the teachers want and need and have expert writers fulfill this need."¹² He feels that when serious professional literature is offered, theory and practice will be "straightly conjoined." This should place material with depth within reach of all teachers.¹³

As recently as 1969, Gaverick claimed that many articles in educational psychology are not prepared to meet the reader needs of teachers. He thinks this is an important time to study the professional reading habits of teachers as this would be one way to improve the manner in which the increased development and dissemination of ideas now occurs.¹⁴ He also declares, "Teachers should be able to demand new ideas in various fields...be made available in a style suitable to the needs of practicing educators."¹⁵

¹¹J. A. Lauwerys, p. 367.

¹²Alan R. Krebs, "Professional Reading--Professional Growth," Overview, I (April, 1960), p. 50.

¹³Ibid.

¹⁴Charles M. Gaverick, "Teachers as Readers of Professional Journals," Contemporary Education, XLI (October, 1969), p. 29.

¹⁵Ibid., p. 28.

In summary, we find the idea that reading by teachers is something they should do to keep in touch with current educational practices. However, it is pointed out that teachers do not read as much professional material as they should. One reason given for this lack of professional reading is that the periodicals do not contain what the teachers need and want. One way to solve this problem is to conduct market research. Through market research, the teachers' professional reading needs and wants could be determined and, consequently, more readily fulfilled. If the teachers' reading needs are better met in the professional periodicals, their professional reading should increase.

After considering the comments by the writers previously mentioned concerning the lack of research on teachers' specific reading preferences, it would seem that a study concerning the types of articles secondary business teachers prefer to read could be helpful and is needed.

The Purpose of the Study

The major purpose of this study was to gather informative data from business education teachers in the secondary public schools of Oklahoma concerning the types of articles they prefer to read as summarized from business education periodicals.

It is the expectation that the knowledge gained from determining the business teachers' reading preferences of articles in business education periodicals will help provide helpful insight to writers and editors of these publications. Therefore, when pondering what is needed in future periodicals, they will have a better basis upon which to make their decisions. As Dr. G. A. Porter asserted,

...to know present status is frequently important in the field of business education. Without knowledge of the

present, one cannot think intelligently or constructively about the future growth and development of any phase of business education.¹⁶

If the knowledge gained from this study can be used as a guide in helping business education periodicals make a more significant contribution to teachers, it will in turn benefit the intended benefactor--the student.

As was indicated previously, this study is to ascertain the reading preferences of secondary business teachers as they see them--not what other business educators say they should be. This does not seem to have been done in the area of professional reading in business education.

The Statement of the Problem

What types of articles (as categorized in hypothesis one) do secondary business teachers prefer to read according to their ranking of selected articles summarized from such professional publications as the Balance Sheet, Business Education Forum, Business Education World, Delta Pi Epsilon Journal, and Journal of Business Education?

Hypotheses

1. H_0 : the type of summarized article (1. research oriented, 2. "how to do," 3. teaching aids and materials, and 4. general information) has no differential effect on the reading preferences of secondary business teachers. H_1 : the type of summarized article has a differential effect on the reading preferences of secondary business teachers.

¹⁶G. A. Porter, "The Survey Study in Business Education," National Business Education Quarterly, XXXV (Winter, 1966), p. 30.

2. H_0 : the groups being compared (taking each variable below one at a time) do not differ significantly in their reading preferences as indicated by their ranking of summarized articles. (For each variable, the respondents were divided into two or more groups and then statistical comparisons were made.)

- a. Number of business education periodicals subscribed to and/or access to.
- b. Completion of at least one college course in educational research and/or educational statistics.
- c. Degree currently held.
- d. Number of years teaching experience.
- e. Sex.
- f. Age.
- g. Size of the secondary school in which the teacher is currently employed.
- h. Total number of class periods taught by the teacher per day in the area of business.
- i. The area of classification (a, basic business, b. bookkeeping and accounting, c. clerical program, d. stenographic program, and e. typewriting) in which the teacher does most of his teaching.

H_1 : the groups being compared for each variable do differ significantly in their reading preferences according to the type of article summarized.

3. H_0 : there is no significant difference in the ranking of the four types of articles summarized from the classification area of basic business (bookkeeping and accounting, clerical program, stenographic program, and typewriting). H_1 : there is a significant difference in the ranking of the four types of articles from the classification area of basic business (bookkeeping and accounting, clerical program, stenographic program, and typewriting).

The Friedman two-way analysis of variance by ranks and the Kruskal-Wallis one-way analysis of variance by ranks--nonparametric statistical tests--were used to test the hypotheses. The chi-square test was also used to analyze the data when it further clarified the statistical findings. The level of significance must be .05 or less before a null hypothesis may be rejected.

Limitations of the Study

The study was limited to a 25 percent random sample from a population consisting of business teachers in the public secondary schools of Oklahoma.

Due to the length of the instrument, the questionnaire was limited to summaries of articles from business education periodicals.

The study was limited to the business teachers' reading preferences in relation to the type of article summarized from business education periodicals. Any inferences drawn from the study were limited to the population defined.

Operational Definitions

1. Business education periodicals - those periodicals specifically concerned with the area of business education.
2. Educational literature - any literature concerned with education in general.
3. Research-oriented article - an article which describes actual research performed and uses some form of statistical analysis.

4. "How to do" article - an article in which the author explains in some detail how he teaches a certain topic or segment of a particular subject.

5. Teaching aids and materials article - an article in which information is given concerning audio-visual aids or other materials that can be used in the classroom.

6. General information article - an article that does not meet the requirements for any of the three types of articles given but does divulge educational information,

7. Basic business - an area of business education that includes such subjects as general business or basic business, consumer economics, economics, business law, and business math.

8. Bookkeeping and accounting - an area of business education that includes such subjects as recordkeeping, bookkeeping, and accounting.

9. Clerical program - an area of business education that includes such subjects as office machines, filing, data processing, office practice, clerical practice, and cooperative office education.

10. Stenographic program - an area of business education that includes such subjects as shorthand, transcription, business English, and secretarial practice.

11. Typewriting - an area of business education that pertains to the subject of typewriting.

CHAPTER II

REVIEW OF THE LITERATURE

Research Concerning Teachers' Reading Preferences

An important item of professional life that seems incongruous with the academic role of teachers is action concerning the reading of professional journals. Teaching and reading are highly associated areas, and it seems that reading would be an indispensable part of being in a teaching activity. In addition to a teacher's continued self-development, there is the example of scholarship for emulation. Beyond that, it would be expected that professional reading would make teaching more pleasant and exhilarating.¹

It is likely that most people would tend to agree with the above statement by Gaverick. One might also be inclined to think that teachers do a lot of professional reading; however, as the following research will indicate, this is not always the case.

From a study in 1929, C. R. Roberts and Robert A. Davis found teachers spent 28 per cent of their reading time in their professional field. Also, their study revealed teaching experience had little effect on the amount of reading the teacher did. They did discover that age has a distinct influence as the oldest group in the study did more professional reading.²

¹Charles M. Gaverick, "Teachers as Readers of Professional Journals," Contemporary Education, XLI (October, 1969), p. 27.

²C. R. Roberts and Robert A. Davis, "Reading Interests of Teachers," Educational Administration and Supervision, XV (February, 1929), pp. 115-116.

In 1933, Waples did a study for the United States Office of Education concerning the reading interests of teachers. He observed that teachers read material similar to what nonteachers read and they indicated an insufficient awareness of social issues.³

Simpson, in doing a study for Clearing House in 1942, found two-thirds of the teachers, on the basis of their own testimony, spent less than two hours per month on professional magazine materials and approximately one in seven spent no time at all on magazine reading. Forty per cent had not looked at one professional book in the preceding month according to Simpson's survey. He concluded that there is a glaring need for more professional reading by school administrators and teachers. According to Simpson the final impact of a lack of professional reading is,

Practice is stronger than precept and until teachers and administrators learn how to make reading function in the intelligent facing of their own problems it is unlikely that they will teach effective reading to their pupils.⁴

One might suppose that teachers have improved in their professional reading habits over the years. However, studies similar to those mentioned above do not support this idea.

Schubert surveyed the 132 experienced teachers enrolled in his reading courses, in 1959, at Los Angeles State College of Applied Arts and Sciences and Central Washington College of Education. He found that experienced teachers in reading methods courses owned few professional

³D. Waples, "Reading Interests of Teachers," Special Survey Studies, Part V, National Survey of the Education of Teachers, Vol. 5, United States Office of Education, Bulletin No. 10, 1933, p. 238.

⁴R. H. Simpson, "Reading Disabilities Among Teachers and Administrators," Clearing House, XVII (September, 1942), pp. 12-13.

books and subscribed to few professional journals. About one-third of the teachers subscribed to no professional journal and one-fifth reported owning no books on reading.⁵

Balow used a sample of 268 teachers and prospective teachers enrolled in a midwestern college of education for his study. He determined that students with four-year liberal arts degrees read nothing more intellectually stimulating than those magazines selected by the general reading public. Graduate students in professional education revealed an equally mundane pattern of reading interests. The predominance of escape reading and absence of intellectually stimulating reading was noted.⁶

From reviewing the research concerning teachers' reading preferences and habits, it is obvious that teachers do some reading. It appears, however, the quality of this reading is what has been questioned by these investigators.

The research previously discussed has dealt primarily with the amount of reading done and the type of periodicals subscribed to by the teachers. There seems to be few research studies dealing with the types of articles read by teachers or by the general public.

A study that touched this area was one by Graves which made the general statement that teachers who read professional journals tend to read about teaching aids, curriculum and instruction.⁷

⁵D. G. Schubert, "Do Teachers Read About Reading?" California Journal of Educational Research, XVII (March, 1960), pp. 94-95.

⁶Bruce Balow, "Magazine Reading Among Teachers and Prospective Teachers," Journal of Teacher Education, XII (March, 1961), p. 58-59.

⁷W. A. Graves, "Teachers' Reading and Recreational Interests," NEA Journal, LV (November, 1966), pp. 17-19.

Plymire did a dissertation concerning the attitudes of business educators concerning the professional contributions of business education periodical literature. He had a sample of 226 state, city, and other supervisors of business education to answer a seventy-two item questionnaire. An analysis of the data from his study indicated there is a high degree of agreement among subgroups of the sample of supervisors of business educators that business education periodical literature is making professional contributions. Plymire concluded the sample of supervisors agreed that the business education periodical literature is making contributions in these areas: teaching methodology, theories and practices, specific subject areas, classroom motivation and business education philosophy.⁸

Raths did a survey of readers of the periodical Educational Leadership to determine what sections of the magazine were usually read carefully. The percentage of readers which usually read carefully the various sections of the magazine were as follows:

Innovations in Education	77.2%
Theme Articles	50.3
Research in Review	35.6
Letters to the Editor	6.8
Research Supplement	30.6
Book Reviews	20.0
News Notes	25.9
Viewpoint	23.5
Advertisements	5.0 ⁹

⁸Boyd Giles Plymire, "The Q-Sort as a Measurement of the Attitudes of Business Educators Concerning the Professional Contributions of Business Education Periodical Literature," (unpub. Ed.D. dissertation, University of North Dakota, 1967).

⁹James D. Raths, "Report of a Survey of Readers of Educational Leadership," Educational Leadership, XXIX (October, 1971), p. 38.

If teachers in general have reading preferences as indicated by the studies just mentioned, it follows that business teachers could have reading preferences according to the type of articles found in business education periodicals.

Due to the findings of the studies concerning teachers' reading habits of professional literature, one might assume teachers do not feel the reading of professional literature is very important. A study by Metzger would tend to indicate the opposite. He asked 130 administrators and teachers to evaluate six basic techniques of inservice education. Of the six techniques, "provision of adequate reading materials" received the highest evaluation and endorsement.¹⁰

With these various ideas in mind concerning teachers' professional reading habits, let us now explore some of the reasons given why teachers should do professional reading in the periodicals.

Reasons Why Teachers Should Read

Educational Periodicals

Professionalism

...reading has long been accepted as a sign of professional interest. Ever since the days of Horace Mann and Henry Barnard teachers have been urged to raise their professional standards by professional reading, among other activities.¹¹

¹⁰Paul Metzger, "Professional Reading: Key to Inservice Development," Catholic School Journal, LXVIII (February, 1968), p. 40.

¹¹Helen Fisher, "Teachers Reading Habits--A Sign of Professional Interest," Journal of Educational Sociology, XXXII (November, 1958), p. 127.

In 1938, business teachers were being given reasons to read.

Graham gave four reasons why the teacher should engage in a systematic professional reading program:

- (1) The "powers-that-be" read.
- (2) The rate of social-economic and educational change is being accelerated.
- (3) Reading is a short-cut.
- (4) We need stimulating contacts with other mature minds.¹²

It has been pointed out that those who use knowledge and teach knowledge must keep up with new knowledge in their fields.

The new experimental studies with potential implications for teaching must be continuously assayed.

Practically every problem a teacher meets has been met with some success by hundreds of other teachers. The key to viewing the experiences of other instructors is often available through the medium of professional reading.¹³

Educators also point out various reasons for teachers to publish and to keep abreast of current happenings in their fields. Nolan and Hayden state that one of the minor criteria used in judging whether or not a particular occupation may be classified as a profession is the availability of adequate professional literature. They go on to say the ambitious business teacher will do considerable professional reading.¹⁴

¹²Jessie Graham, "Would You Advance: Then Read!" Business Education World, XVIII (May, 1938), pp. 736-738.

¹³Glenn Myers Blair, R. Stewart Jones, and Ray H. Simpson, Educational Psychology (New York, 1968), p. 591.

¹⁴C. A. Nolan, Carlos D. Hayden, and Dean R. Malsbary, Principles and Problems of Business Education (Cincinnati, 1967), p. 612.

In talking about "you and your profession," Garrison includes systematic reading of general education information and keeping informed of the best practices in the field as ways of contributing to the teacher's effectiveness in the classroom.¹⁵

From these comments one may conclude the reading of business education periodicals is considered important in the professionalization of the business teacher.

Creativity

According to Debrum, a distinguishing quality of the effective teacher is creativity. The teacher must have an acquisitive nature, and the effective business teacher will be a creator and collector of teaching aids to supplement traditional instructional materials. The effective business teacher should continue to study the limitless body of knowledge, and he will read business and business education periodicals, among others, to help propagate his knowledge of the field.¹⁶

Robinson illustrated, by use of a real-life situation, how a teacher can take the material and knowledge gained from reading professional literature to improve and stimulate his own teaching.¹⁷

¹⁵Lloyd L. Garrison, "How Professional Are You," Business Education Forum, XV (May, 1961), p. 17.

¹⁶S. Joseph Debrum, "Creativity in the Basic Business Curriculum--Distinguishing Qualities of the Effective Teacher," Business Education Forum, XXIII (March, 1969), pp. 3-4.

¹⁷Thomas E. Robinson, "Reading Maketh a Good Teacher," NEA Journal, XXXVIII (January, 1949), pp. 42-43.

Smith, in writing about "What Makes an Effective Teacher," supports the idea of the teacher writing for publication and extending his curiosity to what others are doing in his field.¹⁸

Parsons makes a broad statement which sums up the effect of professional reading by an acquisitive and creative teacher.

Teachers need to read in order to have well-rounded personalities,...to be familiar with the world around them, to strengthen their minds and gain wisdom, to enable the full force of their abilities and personalities to reach out and lead those who have been entrusted to them on to ever-new heights of good living, self-development, and learning.¹⁹

Update Materials, Teaching Aids and Techniques

Learning is a lifelong task and "regular and systematic professional reading broadens horizons, updates material and techniques, and continues the spirit of inquiry essential in every profession."²⁰

Nelson points out the scanning of professional journals in business education such as Business Education Forum, Business Education World, Foundations for Business Education, and Business Teacher is particularly helpful in collecting supplementary teaching aids. He also suggests the reviewing of past business education periodicals for techniques and activities about teaching specific business topics is especially helpful for the beginning teacher.²¹

¹⁸Charles B. Smith, "What Makes an Effective Teacher," Balance Sheet, XLIII (October, 1961), p. 66.

¹⁹Arthur H. Parsons, Jr., "The Teacher's Need to Read," NEA Journal, XLVII (March, 1958), p. 169.

²⁰William H. Conley, "Learning Is a Lifelong Task," Catholic School Journal, LXIX (December, 1969), p. 9.

²¹Robert E. Nelson, "Building a Resource File in Basic Business," Business Education Forum, XXIII (November, 1968), pp. 24-25.

In a study by Shinpoch, the data indicated that there is a difference in the number of class periods a teacher teaches in his major area and in the regularity of reading professional publications. He reported the group which taught mostly in the area (biology) had a higher confidence in the use of current terminology in biology. This probably was due to the reading of the professional publications as the terms analyzed were selected from such publications. The teachers who taught several courses outside biology read more general educational publications than did the other group. His study drew no conclusions as to the types of articles the teachers preferred to read--only that their familiarity with certain biological terms was affected.²²

Moffatt and Rich maintain it is desirable that everyone in educational work devote a block of time to professional reading, especially those new and live materials which will be of assistance in keeping one professionally alert so as to be informed about contemporary trends.²³

Teaching is a professional field where changes are constantly taking place. New discoveries in psychology and in methods of teaching are the rule rather than the exception. The graduate of a teacher-training institution of ten years ago, if he has not kept up to date, would be astonished by advances which have been made even in that short time in the techniques of his profession. Changes and new developments in subject matter fields also are moving ahead at a fast pace. The teacher who is to be a challenging leader of children must learn how to keep abreast of such changes and in a very real sense continue to be a learner after his formal education has been completed.²⁴

²²John Russell Shinpoch, "A Status Study of Biology Teachers in the Public Secondary Schools of the State of Oklahoma," (unpub. Ed.D. Dissertation, Oklahoma State University, 1967), p. 26.

²³Marice P. Moffatt and Stephen G. Rich, "The Educator's Professional Reading," Journal of Educational Sociology, XXIX (October, 1955), p. 69.

²⁴Glenn Myers Blair, R. Stewart Jones, and Ray H. Simpson, p. 607.

Teachers as Consumers of Educational
Literature and Research

One of the justifications given for a teacher to publish is the influence the writing will have on other teachers.

Why write? First is the matter of influence. A teacher beginning his career today--teaching six classes a day, of 35 students each--will not influence more than about 10,000 students during his entire 40-year career. That same teacher may easily influence as many people--or even two or three times that number--in a single month by writing just one article.²⁵

This justification seems to assume a great deal about teachers' consumption of literature and its effect on them. This assumption is questioned by teachers and educators, as well it should be with the lack of research in this area.

Milham (who limits his statements to typewriting research but states it could apply to any area of business education) asks, "But what exactly does research in business education do for the classroom teacher and his students? Aren't we supposed to be the beneficiaries of such research?"²⁶

He also questions if teachers understand it. And of those who do, how does it affect them, and do they profit from it? Milham feels he has spent valuable time and energy for nought reading current articles based on research in business education. For the past fifteen years, he has read innumerable articles in various business education journals and

²⁵Enoch J. Haga, "You Have a Stake in Writing for Publication," Business Education World, XLIX (September, 1968), p. 20.

²⁶George E. Milham, "What Good Is Research in Typewriting," Business Education World, XLVIII (September, 1967), p. 11.

listened to speakers quote from research; yet, he is positive that the fundamental manner in which he teaches typewriting has not changed one iota during the fifteen-year period. He is merely pointing out that despite his widespread reading, it has not influenced his teaching nor swayed his beliefs.²⁷

Milham raises other points that should cause the writers and editors to take a closer look at what they are trying to accomplish. He notes the student teachers his school receives reflect the thinking of their institutions, and they come with the same procedures as were taught at least fifteen years ago. He has come to the conclusion that researchers tend to write for either their own satisfaction or for the benefit of one another--they obviously do not cater to the average reader. He questions the "gobbledy-gook" used in articles that few people outside the writer's own little world really understand.²⁸

It is obvious that Milham has taken an extremist's viewpoint. However, he raises questions which could reflect the thoughts of other teachers in business education.

Rowe, Lloyd, West, and Cook reply to Milham's criticisms of business education research. But even they raise some doubts as to the actual influence of the literature on teachers. Rowe contends much research has influenced typewriting methodology to the extent that basic typewriting skill and production have improved dramatically within recent years,²⁹ Lloyd points out that business education magazines carry

²⁷ George E. Milham, pp. 11-12.

²⁸ Ibid., pp. 12-14.

²⁹ John L. Rowe, "What Typewriting Research Has Accomplished," Business Education World, XLVIII (September, 1967), p. 12.

articles in which researchers explain their findings in practical terms.³⁰ West feels it is desirable for an investigator to try to "translate" his research for teachers, but there is a limit on what can be done in a professional journal article. He feels the teacher has to bring something to his reading. West answers Milham's reference to "gobbledygook" in his distinct style (it so happened Milham used a quote from West as an example). West declares,

Those who label as "impressive verbiage" terms and concepts like hypothesis, kinesthetic cues, rate of acquisition, and the like are merely testifying to the deficiencies in their own educational background.³¹

West also comments that this is a rather sad commentary on teacher education programs.³²

Yet, Milham has made his point. If the basic purpose of business education periodicals is to benefit the teacher and the student, should not the writers consider this problem? How many other business education teachers feel the same way? What types of articles do business education teachers prefer to read? These seem to be valid questions, and the answers could be important in the implications for teacher education programs and their treatment of educational research classes as well as for writers and editors of business education periodicals.

Cook emphasizes that research in business education can do nothing for the classroom teacher until the teacher utilizes the findings of

³⁰Alan C. Lloyd, "Why Do Teachers Fail to Apply the Results of Typing Research," Business Education World, XLVIII (September, 1967), p. 14.

³¹Leonard J. West, "Teachers' Perceptions of Research," Business Education World, XLVIII (September, 1967), p. 35.

³²Ibid.

research in his own classes. He disagrees with Milham as he submits research has made a difference for thousands of thinking practitioners in the field of typewriting--including classroom teachers, teacher educators, supervisors, authors and publishers.³³

Although they disagree with Milham on the quality of business education research, Lloyd³⁴ and West³⁵ agree that the change in the classroom has not been as rapid as it should have been.

Rowe³⁶ and West³⁷ recognize a need for better dissemination of research findings, better interpretations of the findings of research to classroom teachers, and for somehow equipping teachers to draw the appropriate conclusions from research findings.

Lloyd, on the other hand, maintains there is no lack of sincere effort to disseminate information about findings. He feels the hitch in transferring the research findings to the classroom is the tendency of all of us to wait for something to be finalized. He states teachers wait for a course of study using this research information to be finalized for them, or they wait for a new kind of textbook to be finalized before they will use research findings in the classroom.³⁸

One method of disseminating research findings is the authority model.

³³Fred S. Cook, "Typing Research Has Made a Difference," Business Education World, XLVIII (September, 1967), p. 37.

³⁴Alan C. Lloyd, p. 14.

³⁵Leonard J. West, p. 37.

³⁶John L. Rowe, p. 13.

³⁷Leonard J. West, p. 36.

³⁸Alan C. Lloyd, p. 14.

This model assumes that the classroom practitioner will independently seek and use research that applies to his classroom practice.

The written word may carry authority in some circles, but the evidence is less than reassuring that research findings are put in practice through printed media.³⁹

There is evidence the assumptions made by the authority model are not always valid. In a statement on who reads articles in scientific journals, John Wilkinson observed that the average scientific contribution is read by a small number of people and some contributions are not read at all. From his research, he concluded that some contributions are read by several hundred people, therefore, most papers are not read at all.⁴⁰

Yelon, in answering the question of whether or not teachers are competent consumers of research, says most teachers know that some relevant research material exists; however, almost none have the time or energy to read all that may be relevant. Some are discouraged from reading research because they do not know how to read and interpret the technical reports. Of those teachers who do know how to interpret these reports, few actually use the knowledge gained for their classroom operations. For this translation and experimentation, time, energy, and requisite knowledge of psychological measurement and statistics are required. As a partial solution, Yelon suggests that "Colleges of

³⁹Maurice J. Eash, "Bringing Research Findings into Classroom Practice," Elementary School Journal, LXVIII (May, 1968), p. 412.

⁴⁰Ibid.

Education" might teach in their "methods" courses how to do systematic reading of research to answer instructional problems.⁴¹

Balow also stresses the need for professional reading emphasis in our teacher education programs.

The finding that graduate students in education read primarily those professional journals supplied gratuitously with organization membership implies that we are not developing habits of professional reading in our teacher education programs.⁴²

Methods to Improve the Professional

Reading Habits of Teachers

It should be emphasized there are ways of encouraging teachers to do more professional reading. There have been means by which administrators and reading consultants were able to influence more professional reading by teachers.

Fisher reported on a study of fifty teachers' reading patterns in relation to education and experience, interest in reading, curriculum committee service, and availability of materials. She ascertained that in schools where professional journals were provided and regularly circulated, teachers did do more reading. Principals were able to strengthen the teachers' reading habits by sending articles to teachers, and by calling attention to recent literature at faculty meetings. Fisher also noted that teachers involved with committees, such as

⁴¹Stephen L. Yelon, "Teachers as Consumers of Research," Psychology in the Schools, VI (April, 1969), p. 155.

⁴²Bruce Balow, p. 58.

curriculum study groups, made time for professional reading on related issues.⁴³

Below are some of the methods Blair, Jones, and Simpson suggest for school boards and administrators to use to improve the professional reading habits of teachers.

- (1) Set aside a small sum of money each month for professional materials.
- (2) Establish with the aid of the teachers and librarians active professional libraries in each school.
- (3) In faculty meetings and elsewhere encourage the discussion and consideration of new ideas relating to methods, materials, and evaluation which are being tried in other school systems.
- (4) Help teachers isolate the specific professional problems which they feel are the most pressing and make it a point to suggest some reading sources from which they might get help.
- (5) Ask individual teachers periodically what they are reading and what ideas they are using from such reading.
- (6) Encourage publishers to send notices of new professional materials to librarians and teachers for their consideration.
- (7) Make provisions in work schedules of teachers so that some time each week can be utilized for studying new practices and trends.⁴⁴

Although it is important for teachers to read professional literature, it is even more important that they use what they read to improve themselves as teachers. While discussing the "professional conscience" and reading, Nash makes this point clear.

⁴³Helen Fisher, "Teacher Differences in Professional Reading," Educational Administration and Supervision, XLIV (September, 1958), pp. 284-287.

⁴⁴Glenn Myers Blair, R. Stewart Jones, and Ray H. Simpson, p. 607.

In order to learn from and be stimulated by what we read we must act upon the book in a precise and aggressive fashion, taking from it only that which we need to enrich ourselves. This involves exchanging our habits of passive for those of active reading. A much smaller part of our total "reading" time should be spent in passing our eyes obediently over tyrannous lines of print, and a much larger part spent in meditation upon and utilization of what we have read.⁴⁵

Blair, Jones, and Simpson declare the ultimate reason for teachers to use their reading for improvement in an "active" manner is to enable themselves to better help the students.

He learns to be a critic of his own performance and stimulates progress among his colleagues and other professional workers. Most important of all, the continually developing teacher affects the behavior of his pupils who learn by example, and profit from the enriched and up-to-date program of studies which almost inevitably ensues.⁴⁶

Summary of Review of the Literature

Most of the studies dealing with teachers' reading preferences pertain to the amount they read and/or the kinds of periodicals to which they subscribe. The emphasis of these studies tended to be on the quality of the reading done by the teachers.

A few studies delve into the types of articles teachers or the general public prefer to read. In each of these studies there have been definite preferences.

These research findings have led to the conclusion that teachers do not do as much professional reading as they should to keep professionally alert. Although this might cause a person to assume teachers

⁴⁵Paul Nash, "Reading and the Professional Conscience," AAUP Bulletin, XLVI (December, 1960), pp. 367-368.

⁴⁶Glenn Myers Blair, R. Stewart Jones, and Ray H. Simpson, p. 607.

do not believe such reading is all that important, one study revealed teachers did, in fact, feel adequate reading materials to be most valuable in aiding them to be more professional. Why this apparent inconsistency? One answer was that the professional literature is not meeting the needs of the teachers. A possible correction of this problem might be to determine the types of articles teachers do need and prefer to read. This would be one way to enable the writers and editors to meet better the teachers' needs and, thus, to possibly improve their professional reading habits.

Several reasons have been given why teachers should read educational periodicals and there appears to be near universal agreement on the need for professional reading.

Teachers are encouraged to write for publication and to keep abreast of current developments in education and their particular field. These activities are deemed important because of the professional aspects involved, the continuation of an inquisitive nature and creativity, and the updating of materials, teaching aids and techniques.

Writing is considered important not only because of the benefits derived by the writer, but because of the assumption it will influence many other teachers and their students

There appears to be a general consensus that teachers are influenced by educational literature; then, paradoxically, they point out the lack of change in the classroom in accordance with current research findings. Most seem to believe a better way of dissemination is needed, and that teachers need to be better equipped in drawing conclusions from their reading of the educational literature.

Many of the writers of the literature apparently assume that what they research and write about is what the teacher wants and needs to read. As pointed out in the review of literature, not all teachers feel this way. Therefore, it would seem reasonable to ask the teachers their reading preferences of various types of articles in the periodicals.

If, for example, business teachers prefer "how to do" articles much more than research-oriented articles, the researcher might want to put his research findings into a "how to do" format. This could result in a broader readership and, thus, better dissemination and use of research findings as well as other types of information. Such findings could be valuable and worthwhile for business educators and their students.

It is important to remember that the purpose of professional reading, and research concerning the teachers' reading habits, is to improve the instructors' teaching methods which will enable them to better educate their students.

CHAPTER III

PROCEDURES OF THE STUDY

Population

The business teachers of the public secondary schools of Oklahoma were selected as the population. The availability of the names of the business education teachers in Oklahoma was a prime consideration in selecting the population. The names and addresses of 1,026 business education teachers were obtained from the Oklahoma State Department of Education.

The individuality added by using the teacher's name in the mailing of the introductory letter and questionnaire was designed to encourage a higher percentage of returns of the questionnaires. This, in turn, should have helped to insure a representative sample.¹

To further insure a representative sample, an unrestricted procedure was applied to the population to determine the sample (the defined population was treated as an entirety and the sample was selected at large). Specifically, the probability method of random sampling was used to select 256 teachers from the 1,026 population.² A random table of

¹W. Rodman Snelling, "The Impact of a Personalized Mail Questionnaire," Journal of Educational Research, LXIII (November, 1969), pp. 126-129.

²David J. Luck, Hugh G. Wales, and Donald A. Taylor, Marketing Research (Englewood Cliffs, N. J., 1970), pp. 220-226, 611-612.

numbers was used in the selection of the 25 percent sample of the total population to insure a minimum of possible bias with respect to the population members designated.³

Development of the Instrument

In order to determine the types of articles that secondary business education teachers prefer to read in business education periodicals, a questionnaire form was developed. First, the articles in the business education periodicals were divided into four types: (1) research oriented, (2) "how to do," (3) teaching aids and materials, and (4) general information. Next, business education was divided into five classifications: (1) basic business, (2) bookkeeping and accounting, (3) clerical program, (4) stenographic program, and (5) typewriting. This classification is used by the Business Education Forum.

The Balance Sheet, Business Education Forum, Business Education World, Delta Pi Epsilon Journal, and Journal of Business Education were surveyed for articles of the four types in each of the five classifications. The criterion for an article to be used on the questionnaire was that it meet the definition of one of the four types of articles in one of the five classifications. Copies of each of the periodicals listed above for 1968 through May, 1971, were obtained and placed in separate stacks. The periodicals were alternately surveyed--starting with the current year--for an article meeting the criterion. The first article read that met the criterion was used. These articles were then

³C. Mitchell Dayton, The Design of Educational Experiments (New York, 1970), pp. 379-383.

summarized and their titles and summaries listed on the questionnaire under the proper classification (see Appendix B).

According to their reading preferences, the teachers ranked the four types of articles under each of the five classifications. The ranking scale consisted of 1, 2, 3, and 4--1 indicating the highest rank or the article most preferred of the four articles, and 4 indicating the lowest rank or the article least preferred of the four articles.

If, as an example, under the typewriting classification the teacher most preferred to read the "how to do" article summarized; he circled one (1) on the scale next to that article,

In addition to the questionnaire, a personal data form was developed to obtain the needed information concerning the teacher and his school (see Appendix B).

The questionnaire was refined through a pilot study in which 20 business educators and graduate students completed the form. They also made suggestions to improve the questionnaire so it would communicate effectively to those who might answer it. Next, the questionnaire and the suggestions for improving the form obtained from the pilot study were reviewed by the members of the researcher's advisory committee. As a result of the constructive criticisms and helpful suggestions obtained through the pilot study and the advisory committee, changes were made and a revised questionnaire prepared.

Collection of the Data

Data was collected by means of questionnaires sent to secondary business education teachers in the public schools of the state of

Oklahoma. The 256 teachers that received the questionnaire were determined by a random sample.

The questionnaire consisted of two parts (see Appendix B). The Personal Data Form included ten items seeking information related to particular characteristics of the individual and his school. The second part of the questionnaire consisted of twenty summarized articles and their titles. These articles were selected from various business education periodicals (see Appendix D). The business education teacher was asked to express his reading preference by making a forced ranking (1 through 4) of the four articles under each classification. One of each of the four types of articles (research oriented, etc.) appeared under each of the five classifications (basic business, etc.). So, listed on the questionnaire were five articles for each of the four types.

Along with the questionnaire, which was stamped and addressed for easy return, the teachers received a letter of request and explanation (see Appendix A). Twelve days after the mailing of the letter and questionnaire, a post card was mailed to the teachers that had not returned the questionnaire (see Appendix C).

Responses were received from 178 (69%) of the 256 secondary business education teachers included in the sample. Of the total response, 153 were usable for a 60 percent usable return from the total sample.

Analysis of the Data

The Friedman two-way analysis of variance by ranks and the Kruskal-Wallis one-way analysis of variance by ranks, nonparametric statistical tests, were used to test the hypotheses. The chi-square test was also used to analyze the data when it further clarified the statistical findings.

Siegel emphasized that parametric statistical tests ought not to be used with data in an ordinal scale and that most nonparametric tests apply to data in an ordinal scale.⁴ Popham states many writers argue that ordinal data should not be subjected to the mathematical operations which are used in parametric analyses since such operations require equidistance between the points on the scale being used. However, most statisticians have rejected this view but they question if there would be any sense to such an analysis.⁵

Some advantages of the nonparametric statistical tests are: (1) probability statements obtained from most nonparametric statistical tests are exact probabilities, regardless of the shape of the population distribution from which the random sample was drawn, and (2) nonparametric statistical tests are available to treat data which are inherently in ranks as well as data whose seemingly numerical scores have the strength of ranks. Such data cannot be treated by parametric methods unless precarious and perhaps unrealistic assumptions are made about the underlying distribution.⁶

The null hypotheses (hypothesis number one and number three) which pertain to k related samples were tested for significance by the Friedman two-way analysis of variance by ranks.

When one wishes to determine if three or more of matched samples differ significantly with respect to data measured at least on an ordinal scale, the Friedman two-way analysis of variance may be employed. This technique

⁴Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), pp. 26-31.

⁵W. James Popham, Educational Statistics Use and Interpretation (New York, 1967), pp. 272-273.

⁶Sidney Siegel, pp. 32-33.

is applied whenever the research is working with sets of matched subjects or when the same subjects have been exposed to different treatment conditions.⁷

For the Friedman test, the data was cast in a two-way table having N rows and k columns. The rows represent the various subjects and the columns represent the various conditions.

If the subjects' scores were independent of the conditions, the set of ranks in each column would represent a random sample from the discontinuous rectangular distribution of 1, 2, 3, and 4, and the rank totals for the various columns would be about equal. If the subjects' scores were dependent on the conditions (i.e., if H_0 were false), then the rank totals would vary from one column to another. Inasmuch as the columns all contain an equal number of cases, an equivalent statement would be that under H_0 the mean ranks of the various columns would be about equal.

The Friedman test determines whether the rank totals (R_j) differ significantly. To make this test, we compute the value of a statistic which Friedman denotes as x_r^2 .

$$x_r^2 = \frac{12}{Nk(k+1)} \sum_{j=1}^k (R_j)^2 - 3N(k+1)$$

where

N = number of rows

k = number of columns

R_j = sum of ranks in jth column

$\sum_{j=1}^k$ Directs one to sum the squares of the sums or ranks over all k conditions.⁸

To summarize, then the rationale of the Friedman two-way analysis of variance rests on the fact that, if matched sets of subjects (or the same subjects exposed to differential

⁷W. James Popham, p. 283.

⁸Sidney Siegel, pp. 166-168.

treatments) are assigned to different groups representing an independent variable, their within sets rankings that are based on the dependent variable will be distributed in a fairly random pattern when the null hypothesis is tenable. When the null hypothesis is untenable, that is, when there are differences between two or more of the groups representing the independent variable, there will be a marked disparity between the sums of ranks for the independent variable groups.

To test for significant differences between the condition (independent variable) groups, the several sums of ranks are inserted in a formula which yields a value (x_r^2) to be subsequently interpreted for significance according to a chi-square table.⁹

In regard to the power of the test, an empirical study by Friedman has shown very favorable results for the x_r^2 test as compared with the most powerful parametric test, the F test.¹⁰

The second hypothesis and its subhypotheses pertaining to k independent samples were tested for significance by the Kruskal-Wallis one-way analysis of variance by ranks. According to Siegel¹¹ and Popham¹², the Kruskal-Wallis one-way analysis of variance may be used to test the null hypothesis that the samples came from the same or identical population.

The test assumes that the variable under study has an underlying continuous distribution and requires at least ordinal measurement of that variable.¹³

According to Popham, the basic rationale for the test is quite simple. If there are no differences among the groups representing the

⁹W. James Popham, p. 284.

¹⁰Sidney Siegel, pp. 172-173.

¹¹Ibid., p. 184.

¹²W. James Popham, p. 285.

¹³Sidney Siegel, pp. 184-185.

independent variable, then when all scores are ranked, irrespective of groups, from highest to lowest, the average sum of ranks for each group should be roughly the same. If there are significant differences among the groups, then a marked disparity among the groups' average sums of ranks will exist.¹⁴

It can be shown that if the samples actually are from the same population, or from identical populations the H (the statistic used in the Kruskal-Wallis test) is distributed as chi-square with $df=k-1$. That is,

$$H = \frac{12}{N(N+1)} \sum_{j=1}^k \frac{R_j^2}{n_j} - 3(N+1)$$

where

k = number of samples

n_j = number of cases in j th sample

$N = \sum n_j$, the number of cases in all samples combined

R_j = sum of ranks in j th sample (column)

$\sum_{j=1}^k$ directs one to sum over the k samples (columns)

is distributed approximately as chi-square with $df=k-1$, for sample sizes (n_j 's) sufficiently large. Therefore, the chi-square table was used to determine the level of significance.¹⁵

¹⁴W. James Popham, p. 285.

¹⁵Sidney Siegel, p. 185.

Since the value of H is somewhat influenced by ties, the effect of ties was corrected by dividing H by the formula given below.

$$1 - \frac{T}{N^3 - N}$$

where

$T = t^3 - t$ (when t is the number of tied observations in a tied group of scores)

$N =$ number of observations in all k samples together, that is, $N = \sum n_j$

T directs one to sum over all groups of ties

Thus a general expression for H corrected for ties is

$$H = \frac{\frac{12}{N(N+1)} \sum_{j=1}^k \frac{R_j^2}{n_j} - 3(N+1)}{1 - \frac{T}{N^3 - N}}$$

The effect of correcting for ties is to increase the value of H and thus to make the result more significant than if it had been uncorrected.

The Kruskal-Wallis test seems to be the most efficient of the non-parametric tests for independent samples. It has the power efficiency of $\frac{3}{\pi} + 95.5$ percent when compared with the F test, the most powerful parametric test.¹⁶

The chi-square test was suitable to aid in the interpretation of the data as it deals with frequencies which were placed in distinct categories. The technique is one of a goodness-of-fit. It may be used to test whether a significant difference exists between an observed

¹⁶Sidney Siegel, pp. 188, 194.

number of responses falling in each category and an expected number based on the null hypothesis.¹⁷

The chi-square test requires that the expected frequencies should not be too small. Walker and Lev suggest that if there are two or more degrees of freedom and roughly approximate probabilities for the test of significance, an expectation of only two in a cell is sufficient.¹⁸ Snedecor and Cochran state the chi-square test is accurate enough for single classification if the smallest expectation is at least one (1).¹⁹

One-sample tests will be tested by the chi-square formula below.

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

where

O_i = observed number of cases categorized in ith category

E_i = expected number of cases in ith category under H_0

$\sum_{i=1}^k$ directs one to sum over all (k) categories

In general, for the one-sample case, when H_0 fully specifies the E_i 's, $df=k-1$, where K stands for the number of categories in the classification (df refers to degrees of freedom which by its size reflects the

¹⁷Sidney Siegel, pp. 42-43.

¹⁸Helen M. Walker and Joseph Lev, Statistical Inference (New York, 1953), p. 107.

¹⁹George W. Snedecor and William G. Cochran, Statistical Methods (Des Moines, 1967), p. 235.

number of observations that are free to vary after certain restrictions have been placed on the data).²⁰

The null hypothesis which pertains to two independent or k independent samples will be tested by the chi-square formula below.

$$x^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where

O_{ij} = observed number of cases categorized in ith row of jth column

E_{ij} = number of cases expected under H_0 to be categorized in ith row of jth column

$\sum_{i=1}^r \sum_{j=1}^k$ directs one to sum over all (r) rows and all (k) columns, i.e., to sum over all cells.²¹

The values of x^2 yielded by the formula above are distributed approximately as chi-square with $df=(r-1)(k-1)$, where r = the number of rows and k = the number of columns in the contingency table. The symbol x^2 is used for the quantity which is calculated from the observed data (using the above formulas) when a chi-square test is performed. The words "chi-square" refer to a random variable which follows the chi-square distribution as given in Table C from Siegel. The significance of the value obtained for x^2 will be determined by use of Table C from Siegel.²²

²⁰Sidney Siegel, p. 43.

²¹Ibid., pp. 104-105.

²²Ibid., pp. 43-44, 249.

Summary

The population used in the study consisted of 1,026 business education teachers in the public secondary schools of Oklahoma. Of these, 256 (25 percent of the population) were randomly selected to receive the questionnaire. The questionnaire was to determine the reading preferences of the business education teachers according to the types of articles summarized from the business education periodicals.

Before mailing the questionnaire, it was refined through the use of suggestions received from a pilot study and the researcher's advisory committee. Sixty-nine percent (178) of the questionnaires were returned and 153 (60 percent) were usable.

Nonparametric statistics were used in the analysis of data. The Friedman two-way analysis of variance by ranks and the Kruskal-Wallis one-way analysis of variance by ranks were used to test the hypotheses. In addition, the chi-square test was used when it further clarified the statistical findings.

The Friedman two-way analysis of variance by ranks was used to determine the differences in the rankings obtained by the four types of articles (research oriented, "how to do," teaching aids and materials, and general information). Therefore, the Friedman test was used to test hypothesis number one and hypothesis number three to determine if the totals of the ranks received by the four types of articles differed significantly.

The Kruskal-Wallis one-way analysis of variance by ranks was used to determine if the rankings received by the four types of article were affected by a specific independent variable. For example, when teachers are grouped according to the number of periodicals they subscribe to, is

there a significant difference in the average sum of ranks received by the four types of articles from the groups of teachers? If there are no differences among the groups representing the independent variable, the average sum of ranks for each group will be roughly the same.

Hypothesis number two was tested by the Kruskal-Wallis test.

The chi-square test was used when goodness-of-fit could help clarify the findings of the other statistical tests. The Friedman test indicates a significant difference in the sum of ranks received by the four types of articles. The chi-square test determines if the total frequency of the number one (1) ranks received by each type of article differed significantly.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

The primary purpose of the study was to determine the types of articles, as summarized from business education periodicals, that secondary business education teachers prefer to read. The population was limited to the secondary business teachers in the public schools of Oklahoma.

In order to obtain the business education teachers' reading preferences, a questionnaire with a ranking scale was used. These data were analyzed by the Friedman two-way analysis of variance by ranks, the Kruskal-Wallis one-way analysis of variance by ranks and, where appropriate, the chi-square test. The level of significance had to be .05 or less before a null hypothesis was rejected.

Findings of the Study

Research Hypothesis One

Hypothesis number one was statistically tested for significance by the Friedman two-way analysis of variance by ranks. The chi-square test was also used to analyze separately each of the four ranks.

Reading Preferences According to the Type of Article (Table I, page 44). On the basis of the evidence presented in Table I, page 44,

hypothesis 1 (the type of summarized article--1. research oriented, 2. "how to do," 3. teaching aids and materials, and 4. general information--has no differential effect on the reading preferences of secondary business teachers) may be rejected at the .001 level of significance.

TABLE I
SECONDARY BUSINESS TEACHERS' READING PREFERENCES IN
RELATION TO THE FOUR TYPES OF ARTICLES AS
DETERMINED BY THE RANKING OF THE 20
SUMMARIZED ARTICLES

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	Information
1	2	3	4	1
2	3	4	1	2
∫ 152	∫ 4	∫ 3	∫ 1.5	∫ 1.5
153	4	2	3	1
Sum of Ranks	463	387	424	255
Average Rank	3.03	2.53	2.77	1.67
$\chi^2 = 95.66^*$	d.f. = 3			$p < .001$

*Significant at the .001 level

Table I contains a summary of each teacher's ranking of the 20 summarized articles according to the four types--research oriented, teaching aids and materials, "how to do," and general information. There were five articles of each of the four types on the questionnaire (see Appendix D, pages 122-126). The teacher gave each of these articles a rank of 1, 2, 3, or 4. Therefore, each type of article received a summed ranking from 5 to 20 by each teacher. For example, a teacher may have given the research-oriented articles a total rank of 11, the teaching aids and materials articles a total rank of 13, the "how to do" articles a total rank of 16, and the general information articles a total rank of 10. Then, as directed by the Friedman statistic, these total ranks were reranked 2, 3, 4, and 1, respectively (as illustrated by individual one in Table I).

According to the sum of ranks and average ranks in Table I, the type of article most preferred to be read was the general information article. It had an average rank of 1.67. Second in reading preference was the teaching aids and materials article with an average rank of 2.53. The "how to do" article was third in reading preference with an average rank of 2.77. The type of article that was least preferred to be read was the research-oriented article with an average rank of 3.03.

To be significant with three degrees of freedom at the .001 level, a Friedman statistic (χ_r^2) of 16.27 was required. The χ_r^2 of 95.66 in Table I was, therefore, significant beyond the .001 level.

A Chi-Square Analysis of Each Rank (Tables II, III, IV, and V--pages 47-50). The Friedman statistic used in Table I dealt with all four ranks by summing these ranks in each column. This does not enable one to statistically determine if the frequency of only one of the four

ranks was significantly more or less than expected for a certain type of article. Therefore, in order to statistically analyze the frequency of each rank given for the four types of articles, a chi-square test was used. This test was not used to test hypothesis one but to clarify, through more detailed analysis, the information in Table I. While the Friedman statistic tells us if the sums of the four ranks received by each type of article differ significantly, the chi-square statistic will help show if there was a significant difference in the frequency of rank one (two, three, or four) received by each type of article. The four chi-square tables given below compare the frequencies of the over-all ranks (1, 2, 3, or 4) given to each type of article by the teachers to the expected frequencies for each rank.

The expected response for a chi-square distribution is mathematically determined. If you have a one by four contingency table, the expected response in each of the four cells is 25 per cent of the total observed responses (N). If you have a contingency table with more than one row, you must multiply the two marginal totals common to a particular cell, and then divide this product by the total observed responses (N). Table II summarizes data in this fashion on page 47.

In Table III it appears that most of the significant difference was due to the disparity between the observed and expected frequencies in the teaching aids and materials cells and in the "how to do" cells. The teaching aids and materials article received more number two (2) ranks than expected. The "how to do" article received fewer number two (2) ranks than expected.

TABLE II
A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF THE
OVER-ALL RANK OF 1 RECEIVED BY EACH OF
THE FOUR TYPES OF ARTICLES

	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
Observed Response	12	20	23	82
Expected Response	34.25	34.25	34.25	34.25
$\chi^2 =$	14.45	+	5.92	+
			3.69	+
				66.57**=
$\chi^2 = 90.63^*$		d.f. = 3		p < .001

*Significant at the .001 level

**This line indicates the portion each cell, or each type of article, contributed to the total chi-square statistic (χ^2). Therefore, in Table II it appears that most of the significant difference of observed responses from expected responses for rank 1 was due to the large disparity between the observed number one (1) ranks and the expected number one (1) ranks for the general information article. A χ^2 of 7.82 with three degrees of freedom is needed to be significant at the .05 level for all one by four chi-square tables. As explained in Chapter III, page 40, a table from Siegel was used to determine the χ^2 needed for .05 significance.¹

According to Table IV, page 49, it appears that most of the significant difference in the frequency of rank three (3) for the four types of

¹Sidney Siegel, p. 249.

articles was found in the teaching aids and materials cells. This type of article received 16.75 more number three (3) ranks than expected.

TABLE III

A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF THE OVER-ALL RANK OF 2 RECEIVED BY EACH OF THE FOUR TYPES OF ARTICLES

	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
Observed Response	26	44	17	37
Expected Response	31	31	31	31
$\chi^2 =$.80	+ 5.45	+ 6.32	+ 1.16 =
$\chi^2 = 13.73^*$		d.f. = 3		p < .01

*Significant at the .01 level

According to Table V, page 50, it appears that most of the significant difference in the frequency of rank four (4) received by the four types of articles was due to the inequality between the observed and expected frequencies in the research-oriented cells and the general information cells. The research-oriented article received 26.75 more number four (4) ranks than expected and the general information article received 25.25 fewer number four (4) ranks than expected.

TABLE IV
 A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF THE
 OVER-ALL RANK OF 3 RECEIVED BY EACH OF
 THE FOUR TYPES OF ARTICLES

	Type of Article						
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information			
Observed Response	24	50	39	20			
Expected Response	33.25	33.25	33.25	33.25			
$\chi^2 =$	2.57	+	8.43	+	.99	+	5.28 =
$\chi^2 = 17.27^*$	d.f. = 3			p < .001			

*Significant at the .001 level

The Friedman statistic in Table I, page 44, disclosed that the differences of the sum of all four ranks (1, 2, 3, and 4) for each type of article was significant. The chi-square statistic (Tables II-V) revealed that when considering the four ranks (1, 2, 3, and 4) separately, the difference between the observed and expected frequencies of each rank for the four types of articles was significant.

Research Hypothesis Two

Hypothesis number two and its subhypotheses were tested by significance by the Kruskal-Wallis one-way analysis of variance by ranks.

These hypotheses dealt with various groups of a specific variable to see if they differed significantly in their rankings, or reading preferences, according to the four types of articles summarized. For example, one independent variable was that of age. The teachers were divided into four age groups. The rankings the teachers in these four age groups gave to the research-oriented articles ("how to do," etc.) were compared to determine if there was any significant difference between the rankings of the four age groups. In order to ascertain if these groups differed significantly in their rankings, the Kruskal-Wallis test compared the groups' rankings to only one of the four types of articles at a time.

TABLE V

A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF THE
OVER-ALL RANK OF 4 RECEIVED BY EACH OF
THE FOUR TYPES OF ARTICLES

	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
Observed Response	60	21	44	8
Expected Response	33.25	33.25	33.25	33.25
$\chi^2 =$	21.52	+ 4.51	+ 3.47	+ 19.17 =
$\chi^2 = 48.67$	d.f. = 3			p < .001

*Significant at the .001 level

Findings relative to the second hypothesis and its subhypotheses are reported in this section.

Number of Business Education Periodicals Subscribed to (Tables VI, VII, VIII, and IX--pages 52-53). Hypothesis 2 a.-1 (the groups of variable a.-1--number of business education periodicals subscribed to--do not differ significantly in their reading preferences according to the type of article summarized) may be rejected only when the type of article is research oriented.

The business teachers were divided into five groups according to the number of business education periodicals they subscribed to--0, 1, 2, 3, and 4 or more. Tables VI, VII, VIII, and IX compare statistically these five groups' rankings of each of the four types of articles. Approximately 50 percent (50.1%) of the business teachers subscribe to one or two business education periodicals, and 17.7 percent of the teachers subscribe to no periodicals.

Although it cannot be determined whether the average sum of ranks of only one of the five groups is in itself significant, we can make observations concerning the various groups from the data given in the tables. Table VI, page 52, reveals that business teachers who subscribe to zero (0) business education periodicals ranked research-oriented articles considerably lower (higher reading preference) than teachers who subscribe to one or more business education periodicals. Those teachers subscribing to four or more business education periodicals ranked the research-oriented articles higher (lower reading preference) than teachers who subscribe to three or fewer periodicals.

TABLE VI

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
GROUPED ACCORDING TO THE NUMBER OF BUSINESS
EDUCATION PERIODICALS SUBSCRIBED TO
BY THE BUSINESS TEACHERS

Number of Periodicals Subscribed to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	R ₁ = 1,623	27	60.11
1	R ₂ = 2,998	40	74.95
2	R ₃ = 2,907	38	76.50
3	R ₄ = 1,518	20	75.92
4 or more	R ₅ = 2,734	28	97.66
Range of Ranks = 1-153 H = 10.24* d.f. = 4 p < .05			

*Significant at the .05 level. A H of 9.49 with four degrees of freedom is needed to be significant at the .05 level. As explained in Chapter III, page 40, a table from Siegel was used to determine the H needed for .05 significance.²

TABLE VII

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED ACCORDING TO THE
NUMBER OF BUSINESS EDUCATION PERIODICALS
SUBSCRIBED TO BY THE BUSINESS TEACHERS

Number of Periodicals Subscribed to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	R ₁ = 2,237	27	82.85
1	R ₂ = 3,370	40	84.26
2	R ₃ = 3,003	38	79.02
3	R ₄ = 1,172	20	58.60
4 or more	R ₅ = 1,998	28	71.37
Range of Ranks = 1-153 H = 5.66 d.f. = 4 p < .30			

²Sidney Siegel, p. 249.

TABLE VIII

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
GROUPED ACCORDING TO THE NUMBER OF BUSINESS
EDUCATION PERIODICALS SUBSCRIBED TO
BY THE BUSINESS TEACHERS

Number of Periodicals Subscribed to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	$R_1 = 2,487$	27	92.12
1	$R_2 = 2,863$	40	71.58
2	$R_3 = 2,872$	38	75.57
3	$R_4 = 1,596$	20	79.80
4 or more	$R_5 = 1,962$	28	70.07
<hr/>			
Range of Ranks = 1-153	$H = 4.62$	$d, f, = 4$	$p < .50$

TABLE IX

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION
ARTICLES GROUPED ACCORDING TO THE NUMBER OF
BUSINESS EDUCATION PERIODICALS SUBSCRIBED
TO BY THE BUSINESS TEACHERS

Number of Periodicals Subscribed to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	$R_1 = 1,917$	27	71.00
1	$R_2 = 3,153$	40	78.83
2	$R_3 = 2,885$	38	75.92
3	$R_4 = 1,784$	20	89.20
4 or more	$R_5 = 2,041$	28	72.91
<hr/>			
Range of Ranks = 1-153	$H = 2.38$	$d, f, = 4$	$p < .70$

A Chi-Square Analysis of the "Number of Business Education Periodicals Subscribed to" Groups (Table X, page 54). The data in Table X, page 54, discloses the results of statistically comparing the reading preferences of the teachers in the five "number of periodicals subscribed to" groups. Only the most preferred to be read, rank of one (1), was analyzed.

TABLE X

A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF RANK 1
GIVEN TO THE FOUR TYPES OF ARTICLES BY THE
FIVE "PERIODICALS SUBSCRIBED TO" GROUPS

Number of Periodicals Subscribed to	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
0	4	2	3	17
1	3	5	9	21
2	2	6	4	21
3	2	1	4	9
4 or more	1	6	3	14
Totals	12	20	23	82
$\chi^2 = 9.40$	d. f. = 12		$p < .70$	

Table X indicates that there was no significant difference between the frequency of rank one (1) received by the four types of articles and the number of business education periodicals subscribed to by the business teachers. Table X does disclose that each of the five groups gave the general information article more number one (1) ranks (82) than the other three types of articles combined (55).

Number of Business Education Periodicals Access to (Tables XI, XII, XIII, and XIV--pages 56-57). On the basis of the data described in Tables XI, XII, XIII, and XIV, hypothesis 2 a.-2 (the groups of variable a.-2--number of business education periodicals access to--do not differ significantly in their reading preferences according to the type of article summarized) may be rejected only when the type of article is teaching aids and materials.

The business teachers were grouped according to the number of business education periodicals they have access to. Of the 153 business teachers, 107 (69.9%) have access to one or more business education periodicals. Tables XI, XII, XIII, and XIV give the results of statistically comparing the rankings of each of the four types of articles obtained from the five groups (periodicals access to).

As shown in Table XII, page 56, the difference between the groups' average sum of ranks for the teaching aids and materials articles was significant at the .05 level. Although it cannot be determined how significant one of the groups' average sum of ranks was, it is possible to observe which groups' rankings differed most from the other groups' rankings. Thus, Table XII discloses that business teachers who have access to four or more business education periodicals ranked teaching

TABLE XI

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED
ARTICLES GROUPED ACCORDING TO THE NUMBER OF
BUSINESS EDUCATION PERIODICALS THE
BUSINESS TEACHERS HAVE ACCESS TO

Number of Periodicals Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	$R_1 = 3,587$	46	77.98
1	$R_2 = 2,813$	29	97.01
2	$R_3 = 2,027$	29	69.91
3	$R_4 = 1,916$	27	70.98
4 or more	$R_5 = 1,436$	22	65.27
Range of Ranks = 1-153		$H = 8.83$	$d.f. = 4$
			$p < .10$

TABLE XII

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED ACCORDING TO THE
NUMBER OF BUSINESS EDUCATION PERIODICALS
THE BUSINESS TEACHERS HAVE ACCESS TO

Number of Periodicals Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	$R_1 = 3,443$	46	74.84
1	$R_2 = 1,937$	29	66.79
2	$R_3 = 2,159$	29	74.44
3	$R_4 = 1,920$	27	71.11
4 or more	$R_5 = 2,322$	22	105.54
Range of Ranks = 1-153		$H = 11.63^*$	$d.f. = 4$
			$p < .05$

*Significant at the .05 level

TABLE XIII

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
 GROUPED ACCORDING TO THE NUMBER OF BUSINESS
 EDUCATION PERIODICALS THE BUSINESS
 TEACHERS HAVE ACCESS TO

Number of Periodicals Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	R ₁ = 3,557	46	77.33
1	R ₂ = 2,096	29	72.29
2	R ₃ = 2,303	29	79.41
3	R ₄ = 2,186	27	80.96
4 or more	R ₅ = 1,638	22	74.45
Range of Ranks = 1-153			
H = 0.71		d.f. = 4	p < .95

TABLE XIV

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION
 ARTICLES GROUPED ACCORDING TO THE NUMBER OF
 BUSINESS EDUCATION PERIODICALS THE BUSINESS
 TEACHERS HAVE ACCESS TO

Number of Periodicals Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0	R ₁ = 3,411	46	74.16
1	R ₂ = 2,143	29	73.89
2	R ₃ = 2,512	29	86.63
3	R ₄ = 2,193	27	81.22
4 or more	R ₅ = 1,521	22	69.13
Range of Ranks = 1-153			
H = 2.68		d.f. = 4	p < .70

aids and materials higher (lower reading preference) than did those teachers which have access to three or fewer periodicals.

A Chi-Square Analysis of "Periodicals Access to" Groups (Table XV, page 58). Table XV, page 58, compares the number of times rank one (1) was given by the five groups to the four types of articles. This statistical analysis was to determine if the five groups differed significantly in the frequency of number one (1) rankings they gave each type of article.

TABLE XV

A CHI-SQUARE ANALYSIS OF THE FREQUENCY OF RANK 1
GIVEN TO THE FOUR TYPES OF ARTICLES BY THE
FIVE "PERIODICALS ACCESS TO" GROUPS

Number of Periodicals Access to	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
0	4	6	4	28
1	1	5	3	16
2	4	4	6	12
3	2	4	6	15
4 or more	1	1	4	11
Totals	12	20	23	82
$\chi^2 = 8.16$	d.f. = 12		$p < .80$	

The findings presented in Table XV reveals that there was no significant difference between the frequency of rank one (1) received by the four types of articles and the number of business education periodicals business teachers have access to.

Total Number of Business Education Periodicals Subscribed to and Access to (Tables XVI, XVII, XVIII, and XIX--pages 60-61). Hypothesis 2 a.-3 (the groups of variable 1.-3--total number of business education periodicals subscribed to and access to--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected on the basis of the evidence presented in Tables XVI, XVII, XVIII, and XIX.

Each business teachers' number of business education periodicals subscribed to and access to were added together. Then, according to his total the business teacher was placed in one of three groups. The largest number of teachers (64) were found in the group which subscribed to and had access to a total of three to four business education periodicals. The three groups' rankings of the four types of articles were not significantly different at the .05 level.

Completion of Course in Educational Research or Educational Statistics (Tables XX, XXI, XXII, and XXIII--pages 62-63). Hypothesis 2 b. (the groups of variable b--completion of at least one college course in educational research and/or educational statistics--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected on the basis of the findings as reported in Tables XX, XXI, XXII, and XXIII.

Tables XX, XXI, XXII, and XXIII show the comparisons of the rankings of the four types of articles by business teachers who have not had an

TABLE XVI

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
 GROUPED ACCORDING TO THE TOTAL NUMBER OF BUSINESS
 EDUCATION PERIODICALS THE BUSINESS TEACHERS
 SUBSCRIBED TO AND HAVE ACCESS TO

Number of Periodicals Subscribed to and Have Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0-2	$R_1 = 2,829$	39	72.53
3-4	$R_2 = 4,889$	64	76.39
5 or more	$R_3 = 4,063$	50	81.26
Range of Ranks = 1-153	$H = 0.88$	d.f. = 2	$p < .70$

TABLE XVII

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED ACCORDING TO THE
 TOTAL NUMBER OF BUSINESS EDUCATION
 PERIODICALS THE BUSINESS TEACHERS
 SUBSCRIBED TO AND HAVE ACCESS TO

Number of Periodicals Subscribed to and Have Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0-2	$R_1 = 3,176$	39	81.44
3-4	$R_2 = 4,526$	64	70.72
5 or more	$R_3 = 4,078$	50	81.56
Range of Ranks = 1-153	$H = 2.25$	d.f. = 2	$p < .50$

TABLE XVIII

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
 GROUPED ACCORDING TO THE TOTAL NUMBER OF
 BUSINESS EDUCATION PERIODICALS THE
 BUSINESS TEACHERS SUBSCRIBED TO
 AND HAVE ACCESS TO

Number of Periodicals Subscribed to and Have Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0-2	$R_1 = 3,136$	39	80.42
3-4	$R_2 = 5,130$	64	80.16
5 or more	$R_3 = 3,514$	50	70.28
Range of Ranks = 1-153	$H = 1.73$	d.f. = 2	$p < .50$

TABLE XIX

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION ARTICLES
 GROUPED ACCORDING TO THE TOTAL NUMBER OF BUSINESS
 EDUCATION PERIODICALS THE BUSINESS TEACHERS
 SUBSCRIBED TO AND HAVE ACCESS TO

Number of Periodicals Subscribed to and Have Access to	Sum of Ranks	Number of Teachers	Average Sum of Ranks
0-2	$R_1 = 2,859$	39	73.32
3-4	$R_2 = 5,003$	64	78.17
5 or more	$R_3 = 3,918$	50	78.36
Range of Ranks = 1-153	$H = 0.36$	d.f. = 2	$p < .90$

TABLE XX

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
AS GIVEN BY BUSINESS TEACHERS WHO HAVE, AND BY
THOSE WHO HAVE NOT, COMPLETED AT LEAST ONE
COLLEGE COURSE IN EDUCATIONAL RESEARCH
AND/OR EDUCATIONAL STATISTICS

Groups of Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Have Completed One Course	$R_1 = 4,869$	65	74.90
Have Not Completed One Course	$R_2 = 6,157$	83	74.18
Range of Ranks = 1-148	$H = 0.01$	d.f. = 1	$p < .95$

TABLE XXI

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND MATERIALS
ARTICLES AS GIVEN BY BUSINESS TEACHERS WHO HAVE,
AND BY THOSE WHO HAVE NOT, COMPLETED AT LEAST
ONE COLLEGE COURSE IN EDUCATIONAL RESEARCH
AND/OR EDUCATIONAL STATISTICS

Groups of Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Have Completed One Course	$R_1 = 5,020$	65	77.23
Have Not Completed One Course	$R_2 = 6,005$	83	72.35
Range of Ranks = 1-148	$H = 0.48$	d.f. = 1	$p < .50$

TABLE XXII

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES AS GIVEN BY BUSINESS TEACHERS WHO HAVE, AND BY THOSE WHO HAVE NOT, COMPLETED AT LEAST ONE COLLEGE COURSE IN EDUCATIONAL RESEARCH AND/OR EDUCATIONAL STATISTICS

Groups of Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Have Completed One Course	$R_1 = 4,997$	65	76.88
Have Not Completed One Course	$R_2 = 6,028$	83	72.63
Range of Ranks = 1-148	$H = 0.36$	d.f. = 1	$p < .70$

TABLE XXIII

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION ARTICLES AS GIVEN BY BUSINESS TEACHERS WHO HAVE, AND BY THOSE WHO HAVE NOT, COMPLETED AT LEAST ONE COLLEGE COURSE IN EDUCATIONAL RESEARCH AND/OR EDUCATIONAL STATISTICS

Groups of Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Have Completed One Course	$R_1 = 4,706$	65	72.40
Have Not Completed One Course	$R_2 = 6,320$	83	76.14
Range of Ranks = 1-148	$H = 0.28$	d.f. = 1	$p < .70$

educational research or educational statistics course with those of teachers who have had such a course. Sixty-five (43.9%) of the respondents have had a course in educational research or statistics.

Degree Currently Held (Tables XXIV, XXV, XXVI, and XXVII--pages 65-66). Hypothesis 2 c. (the groups of variable c.--degree currently held--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected on the basis of the findings reported in Tables XXIV, XXV, XXVI, and XXVII.

These four tables contain the statistical comparisons of the ranks of the four types of articles as given by business teachers with a bachelors degree (55.6%) to the ranks given by business teachers with a masters degree or above (44.4%). Only one business teacher had a degree (specialists degree) above the masters degree.

Although the findings in Table XXVI, page 66, were not significant (p .20), they disclose that the business teachers with bachelors degrees had a lower rank (higher reading preference) for the "how to do" articles than did the business teachers with masters degrees or above.

Number of Years Teaching Experience (Tables XXVIII, XXIX, XXX, and XXXI--pages 67-68). Hypothesis 2 d. (the groups of variable d.--number of years teaching experience--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected on the basis of the results of the findings as described in Tables XXVIII, XXIX, XXX, and XXXI.

The business teachers were placed in three groups according to their number of years of teaching experience: 1-5 years, 6-15 years, and 16 years or more. The largest group was the 1-5 years of teaching experience group with 61 (39.9%) of the business teachers.

TABLE XXIV

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED
ARTICLES GROUPED ACCORDING TO THE
DEGREE HELD

Degree Held by Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Bachelors Degree	$R_1 = 6,671$	85	78.48
Masters Degree or Above	$R_2 = 5,109$	68	75.13
Range of Ranks = 1-153	$H = 0.21$	d.f. = 1	$p < .70$

TABLE XXV

AVERAGE SUM OF RANKS OF THE TEACHING AIDS
AND MATERIALS ARTICLES GROUPED ACCORDING
TO THE DEGREE HELD

Degree Held by Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Bachelors Degree	$R_1 = 6,528$	85	76.80
Masters Degree or Above	$R_2 = 5,253$	68	77.25
Range of Ranks = 1-153	$H = 0.003$	d.f. = 1	$p < .98$

TABLE XXVI
 AVERAGE SUM OF RANKS OF THE "HOW TO DO"
 ARTICLES GROUPED ACCORDING TO THE
 DEGREE HELD

Degree Held by Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Bachelors Degree	$R_1 = 6,172$	85	72.61
Masters Degree or Above	$R_2 = 5,609$	68	82.48
Range of Ranks = 1-153	$H = 1.90$	d.f. = 1	$p < .20$

TABLE XXVII
 AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION
 ARTICLES GROUPED ACCORDING TO
 THE DEGREE HELD

Degree Held by Business Teachers	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Bachelors Degree	$R_1 = 6,637$	85	78.08
Masters Degree or Above	$R_2 = 5,143$	68	75.63
Range of Ranks = 1-153	$H = 0.11$	d.f. = 1	$p < .80$

TABLE XXVIII

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED
ARTICLES GROUPED ACCORDING TO THE
NUMBER OF YEARS TEACHING
EXPERIENCE

Number of Years Teaching Experience	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1-5	$R_1 = 4,160$	61	68.19
6-15	$R_2 = 2,923$	39	74.96
16 and above	$R_3 = 3,212$	43	74.70
Range of Ranks = 1-143	$H = 0.90$	d.f. = 2	$p < .70$

TABLE XXIX

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED ACCORDING TO
THE NUMBER OF YEARS TEACHING
EXPERIENCE

Number of Years Teaching Experience	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1-5	$R_1 = 4,622$	61	75.77
6-15	$R_2 = 2,526$	39	64.76
16 and above	$R_3 = 3,148$	43	73.20
Range of Ranks = 1-143	$H = 1.77$	d.f. = 2	$p < .50$

TABLE XXX

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
GROUPED ACCORDING TO THE NUMBER OF
YEARS TEACHING EXPERIENCE

Number of Years Teaching Experience	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1-5	$R_1 = 4,011$	61	65.76
6-15	$R_2 = 3,003$	39	77.01
16 and above	$R_3 = 3,281$	43	76.30
Range of Ranks = 1-143	$H = 2.45$	d.f. = 2	$p < .30$

TABLE XXXI

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION
ARTICLES GROUPED ACCORDING TO THE NUMBER
OF YEARS TEACHING EXPERIENCE

Number of Years Teaching Experience	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1-5	$R_1 = 4,760$	61	78.04
6-15	$R_2 = 2,838$	39	72.78
16 and above	$R_3 = 2,697$	43	62.72
Range of Ranks = 1-143	$H = 3.53$	d.f. = 2	$p < .20$

Although the findings in Table XXX, page 68, were not significant ($p < .30$), they show that the business teachers with the fewest years of teaching experience gave the "how to do" articles the lowest rank (highest reading preference). Although not significant ($p < .20$), the results given in Table XXXI, page 68, indicate that as the business teachers' number of years teaching experience increases, their reading preference for the general information articles tends to increase.

Sex (Tables XXXII, XXXIII, XXXIV, and XXXV--pages 70-71).

Hypothesis 2 e. (the groups of variable e.--sex--do not differ significantly in their reading preferences according to the type of article summarized) may be rejected only when the type of article is teaching aids and materials as indicated by the findings in Table XXXIII, page 70.

The rankings of the four types of articles by 32 men and 121 women were compared and the results listed in Tables XXXII-XXXV. Only in the ranking of the teaching aids and materials articles did these two groups significantly differ (.05 level). Table XXXIII, page 70, shows that male business teachers rank teaching aids and materials articles significantly higher (90.96--lower reading preference) than the female business teachers (73.30).

Age (Tables XXXVI, XXXVII, XXXVIII, and XXXIX--pages 72-73).

Hypothesis 2 f. (the groups of variable f.--age--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected on the basis of the evidence disclosed in Tables XXXVI, XXXVII, XXXVIII, and XXXIX.

Tables XXXVI-XXXIX contain the results of comparing the rankings of the four types of articles by four different age groups of business

TABLE XXXII
 AVERAGE SUM OF RANKS OF THE RESEARCH-
ORIENTED ARTICLES GROUPED
 ACCORDING TO SEX

Business Teachers Grouped by Sex	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Male	$R_1 = 2,272$	32	71.01
Female	$R_2 = 9,508$	121	78.58
Range of Ranks = 1-153	$H = 0.74$	d.f. = 1	$p < .50$

TABLE XXXIII
 AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED
 ACCORDING TO SEX

Business Teachers Grouped by Sex	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Male	$R_1 = 2,911$	32	90.96
Female	$R_2 = 8,870$	121	73.30
Range of Ranks = 1-153	$H = 4.12^*$	d.f. = 1	$p < .05$

*Significant at the .05 level

TABLE XXXIV
 AVERAGE SUM OF RANKS OF THE "HOW TO DO"
 ARTICLES GROUPED ACCORDING
 TO SEX

Business Teachers Grouped by Sex	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Male	$R_1 = 2,438$	32	76.18
Female	$R_2 = 9,343$	121	77.21
Range of Ranks = 1-153	$H = 0.01$	d.f. = 1	$p < .95$

TABLE XXXV
 AVERAGE SUM OF RANKS OF THE GENERAL
INFORMATION ARTICLES GROUPED
 ACCORDING TO SEX

Business Teachers Grouped by Sex	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Male	$R_1 = 2,320$	32	72.50
Female	$R_2 = 9,461$	121	78.19
Range of Ranks = 1-153	$H = 0.42$	d.f. = 1	$p < .70$

TABLE XXXVI
 AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED
 ARTICLES GROUPED ACCORDING
 TO AGE

Business Teachers Grouped by Age	Sum of Ranks	Number of Teachers	Average Sum of Ranks
20-29	$R_1 = 3,175$	40	79.37
30-39	$R_2 = 3,478$	50	69.56
40-49	$R_3 = 2,283$	31	73.64
50 and above	$R_4 = 2,692$	31	86.83
Range of Ranks = 1-152	$H = 3.29$	d.f. = 3	$p < .50$

TABLE XXXVII
 AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND
MATERIALS ARTICLES GROUPED
 ACCORDING TO AGE

Business Teachers Grouped by Age	Sum of Ranks	Number of Teachers	Average Sum of Ranks
20-29	$R_1 = 3,122$	40	78.06
30-39	$R_2 = 4,008$	50	80.16
40-49	$R_3 = 2,509$	31	80.95
50 and above	$R_4 = 1,988$	31	64.12
Range of Ranks = 1-152	$H = 3.23$	d.f. = 3	$p < .50$

TABLE XXXVIII
 AVERAGE SUM OF RANKS OF THE "HOW TO DO"
 ARTICLES GROUPED ACCORDING
 TO AGE

Business Teachers Grouped by Age	Sum of Ranks	Number of Teachers	Average Sum of Ranks
20-29	$R_1 = 2,611$	40	65.28
30-39	$R_2 = 3,888$	50	77.76
40-49	$R_3 = 2,563$	31	82.67
50 and above	$R_4 = 2,565$	31	82.75
Range of Ranks = 1-152	$H = 3.93$	d.f. = 3	$p < .30$

TABLE XXXIX
 AVERAGE SUM OF RANKS OF THE GENERAL
INFORMATION ARTICLES GROUPED
 ACCORDING TO AGE

Business Teachers Grouped by Age	Sum of Ranks	Number of Teachers	Average Sum of Ranks
20-29	$R_1 = 3,407$	40	85.18
30-39	$R_2 = 3,980$	50	79.61
40-49	$R_3 = 2,125$	31	68.56
50 and above	$R_4 = 2,114$	31	68.20
Range of Ranks = 1-152	$H = 3.91$	d.f. = 3	$p < .30$

teachers. The business teachers were placed in the following age groups: 20-29, 30-39, 40-49, and 50 and above. Respectively, each group consisted of 40 (26.3%), 50 (32.9%), 31 (20.4%), and 31 (20.4%) business teachers.

There were no significant differences reported between the four groups on any of the four types of articles. However, Table XXXVIII, page 73, divulges that as age increased the rankings of the "how to do" articles also tended to increase (reading preference decreased). Table XXXIX, page 73, reveals that as age increased the ranking of the general information articles tended to decrease (reading preference increased).

Size of the Secondary School in Which the Teacher Is Currently Employed (Tables XL, XLI, XLII, and XLIII--pages 75-76). Hypothesis 2 g. (the groups of variable g.--size of the secondary school in which the teacher is currently employed--do not differ significantly in their reading preferences according to the type of article summarized) may not be rejected as the testing data in Tables XL, XLI, XLII, and XLIII does not provide sufficient evidence.

The business teachers were placed into one of six groups depending on the size of the secondary school in which they were teaching. The six groups were determined according to enrollment as follows: 99 or below, 100-299, 300-499, 500-699, 700-999, and 1,000 or above. The two largest groups were the 1,000 or above enrollment group with 45 teachers (29.4%) and the 100-299 enrollment group with 44 teachers (28.7%). The enrollment group with the smallest number of teachers (11 or 7.2%) was the 700-999 group. The tables on the next two pages show the comparisons of the rankings of the four types of articles by the business teachers

TABLE XL

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
 GROUPED ACCORDING TO THE SIZE OF THE SECONDARY
 SCHOOL IN WHICH THE BUSINESS
 TEACHER IS EMPLOYED

Enrollment Size of Secondary School	Sum of Ranks	Number of Teachers	Average Sum of Ranks
99 or below	$R_1 = 1,080$	16	67.53
100-299	$R_2 = 3,498$	44	79.51
300-499	$R_3 = 2,185$	24	91.04
500-699	$R_4 = 767$	13	59.00
700-999	$R_5 = 715$	11	65.04
1,000 or above	$R_6 = 3,534$	45	78.54
Range of Ranks = 1-153	$H = 6.36$	d.f. = 5	$p < .30$

TABLE XLI

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND MATERIALS
 ARTICLES GROUPED ACCORDING TO THE SIZE OF THE
 SECONDARY SCHOOL IN WHICH THE BUSINESS
 TEACHER IS EMPLOYED

Enrollment Size of Secondary School	Sum of Ranks	Number of Teachers	Average Sum of Ranks
99 or below	$R_1 = 1,294$	16	80.87
100-299	$R_2 = 3,518$	44	79.95
300-499	$R_3 = 1,750$	24	72.91
500-699	$R_4 = 970$	13	74.61
700-999	$R_5 = 799$	11	72.68
1,000 or above	$R_6 = 3,449$	45	76.65
Range of Ranks - 1-153	$H = 0.68$	d.f. = 5	$p < .99$

TABLE XLII

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
GROUPED ACCORDING TO THE SIZE OF THE
SECONDARY SCHOOL IN WHICH THE
BUSINESS TEACHER IS EMPLOYED

Enrollment Size of Secondary School	Sum of Ranks	Number of Teachers	Average Sum of Ranks
99 or below	$R_1 = 1,282$	16	80.15
100-299	$R_2 = 3,323$	44	75.52
300-499	$R_3 = 1,868$	24	77.83
500-699	$R_4 = 1,241$	13	95.46
700-999	$R_5 = 940$	11	85.50
1,000 or above	$R_6 = 3,126$	45	69.46
Range of Ranks - 1-153	$H = 4.16$	d.f. = 5	$p < .70$

TABLE XLIII

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION
ARTICLES GROUPED ACCORDING TO THE SIZE OF
THE SECONDARY SCHOOL IN WHICH THE
BUSINESS TEACHER IS EMPLOYED

Enrollment Size of Secondary School	Sum of Ranks	Number of Teachers	Average Sum of Ranks
99 or below	$R_1 = 1,305$	16	81.56
100-299	$R_2 = 3,362$	44	76.42
300-499	$R_3 = 1,413$	24	58.89
500-699	$R_4 = 877$	13	67.50
700-999	$R_5 = 996$	11	90.59
1,000 or above	$R_6 = 3,829$	45	85.02
Range of Ranks = 1-153	$H = 7.42$	d.f. = 5	$p < .20$

in these six groups. According to the data presented, the six groups did not differ significantly in their rankings of the four types of articles.

Total Number of Class Periods Taught by the Teacher Per Day in the Area of Business (Tables XLIV, XLV, XLVI, and XLVII--pages 78-79).

On the basis of the testing data described in Tables XLIV, XLV, XLVI, and XLVII, hypothesis 2 h. (the groups of variable h.--total number of class periods taught by the teacher per day in the area of business--do not differ significantly in their rankings of the four types of articles summarized) may not be rejected.

The results reported in Tables XLIV-XLVII were obtained by comparing the rankings given to the four types of articles by six groups of business teachers. The business teachers were placed into six groups depending on how many class periods (1, 2, 3, 4, 5, or 6) per day they spend teaching business subjects. Over one-half of the business teachers (52.6%) spend five class periods per day teaching business subjects. As revealed in the tables on pages 78 and 79, the groups did not differ significantly in their rankings of the four types of articles.

The Area of Classification in Which the Teacher Does Most of His Teaching (Tables XLVIII, XLIX, L, and LI--pages 80-81). Hypothesis 2 i.

(the groups of variable i.--the area of classification in which the teacher does most of his teaching--do not differ significantly in their rankings of the four types of articles summarized) may not be rejected on the basis of the data presented in Tables XLVIII, XLIX, L, and LI.

TABLE XLIV

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
GROUPED ACCORDING TO THE TOTAL NUMBER OF CLASS
PERIODS TAUGHT BY THE TEACHER PER DAY
IN THE AREA OF BUSINESS

Number of Periods Taught in Business	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1	$R_1 = 296$	5	59.30
2	$R_2 = 758$	12	63.16
3	$R_3 = 1,631$	21	77.66
4	$R_4 = 1,472$	23	64.02
5	$R_5 = 6,516$	80	81.45
6	$R_6 = 953$	11	86.68
Range of Ranks = 1-152			
$H = 5.40$			
d.f. = 5			
$p < .50$			

TABLE XLV

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND MATERIALS
ARTICLES GROUPED ACCORDING TO THE TOTAL NUMBER OF
CLASS PERIODS TAUGHT BY THE TEACHER PER
DAY IN THE AREA OF BUSINESS

Number of Periods Taught in Business	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1	$R_1 = 350$	5	70.10
2	$R_2 = 1,051$	12	87.62
3	$R_3 = 1,815$	21	86.42
4	$R_4 = 2,099$	23	91.28
5	$R_5 = 5,469$	80	68.36
6	$R_6 = 842$	11	76.54
Range of Ranks = 1-152			
$H = 7.44$			
d.f. = 5			
$p < .20$			

TABLE XLVI

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES
 GROUPED ACCORDING TO THE TOTAL NUMBER OF CLASS
 PERIODS TAUGHT BY THE TEACHER PER DAY
 IN THE AREA OF BUSINESS

Number of Periods Taught in Business	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1	$R_1 = 513$	5	102.70
2	$R_2 = 1,049$	12	87.45
3	$R_3 = 1,372$	21	65.33
4	$R_4 = 1,628$	23	70.80
5	$R_5 = 6,237$	80	77.96
6	$R_6 = 827$	11	75.18
Range of Ranks = 1-152			
$H = 4.41$		$d.f. = 5$	$p < .50$

TABLE XLVII

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION ARTICLES
 GROUPED ACCORDING TO THE TOTAL NUMBER OF CLASS
 PERIODS TAUGHT BY THE TEACHER PER DAY
 IN THE AREA OF BUSINESS

Number of Periods Taught in Business	Sum of Ranks	Number of Teachers	Average Sum of Ranks
1	$R_1 = 279$	5	55.80
2	$R_2 = 918$	12	76.54
3	$R_3 = 1,620$	21	77.16
4	$R_4 = 2,000$	23	86.97
5	$R_5 = 5,999$	80	74.99
6	$R_6 = 810$	11	73.63
Range of Ranks = 1-152			
$H = 2.60$		$d.f. = 5$	$p < .80$

TABLE XLVIII

AVERAGE SUM OF RANKS OF THE RESEARCH-ORIENTED ARTICLES
GROUPED ACCORDING TO THE AREA OF CLASSIFICATION IN
WHICH THE TEACHER DOES MOST OF HIS TEACHING

Area of Classification	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Basic Business	$R_1 = 1,404$	20	70.20
Bkpping & Accounting	$R_2 = 1,343$	15	89.53
Clerical Program	$R_3 = 1,814$	22	82.47
Stenographic Program	$R_4 = 1,357$	23	59.02
Typewriting	$R_5 = 5,557$	71	78.26
Range of Ranks = 1-151	$H = 6,00$	d.f. = 4	$p < .20$

TABLE XLIX

AVERAGE SUM OF RANKS OF THE TEACHING AIDS AND MATERIALS
ARTICLES GROUPED ACCORDING TO THE AREA OF
CLASSIFICATION IN WHICH THE TEACHER
DOES MOST OF HIS TEACHING

Area of Classification	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Basic Business	$R_1 = 1,629$	20	81.45
Bkpping & Accounting	$R_2 = 1,037$	15	69.13
Clerical Program	$R_3 = 1,607$	22	73.06
Stenographic Program	$R_4 = 1,877$	23	81.60
Typewriting	$R_5 = 5,325$	71	75.00
Range of Ranks = 1-151	$H = 1.22$	d.f. = 4	$p < .80$

TABLE L

AVERAGE SUM OF RANKS OF THE "HOW TO DO" ARTICLES GROUPED
ACCORDING TO THE AREA OF CLASSIFICATION IN WHICH
THE TEACHER DOES MOST OF HIS TEACHING

Area of Classification	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Basic Business	$R_1 = 1,388$	20	69.42
Bkpping & Accounting	$R_2 = 995$	15	66.33
Clerical Program	$R_3 = 1,528$	22	69.47
Stenographic Program	$R_4 = 2,250$	23	97.82
Typewriting	$R_5 = 5,314$	71	74.84
Range of Ranks = 1-151	$H = 7.57$	d.f. = 4	$p < .20$

TABLE LI

AVERAGE SUM OF RANKS OF THE GENERAL INFORMATION ARTICLES
GROUPED ACCORDING TO THE AREA OF CLASSIFICATION IN
WHICH THE TEACHER DOES MOST OF HIS TEACHING

Area of Classification	Sum of Ranks	Number of Teachers	Average Sum of Ranks
Basic Business	$R_1 = 1,569$	20	78.45
Bkpping & Accounting	$R_2 = 1,150$	15	76.70
Clerical Program	$R_3 = 1,965$	22	89.34
Stenographic Program	$R_4 = 1,575$	23	68.50
Typewriting	$R_5 = 5,215$	71	73.45
Range of Ranks = 1-151	$H = 3.08$	d.f. = 4	$p < .70$

The business teachers were placed into five groups according to the area of classification in which they do most of their teaching: basic business, bookkeeping and accounting, clerical program, stenographic program, and typewriting. Respectively, each group consisted of 20 (13.3%), 15 (9.9%), 22 (14.6%), 23 (15.2%), and 71 (47.0%).

Although the findings in Table XLVIII, page 80, were not significant ($p < .20$), they disclose that the business teachers in the stenographic program group gave research-oriented articles the lowest ranking (highest reading preference) of any of the groups. Table L, page 81, reveals that the business teachers in the stenographic program gave the "how to do" articles a ranking considerably higher (lower reading preference) than did any of the other groups. The other groups were very close in their ranking of the "how to do" articles, therefore, the difference in Table L was not significant ($p < .20$).

Research Hypothesis Three

Hypothesis number three was statistically tested for significance by the Friedman two-way analysis of variance by ranks. In order to determine if the rankings of the four types of articles differed significantly in each classification area, a Friedman was run on each classification area: basic business, bookkeeping and accounting, clerical program, stenographic program, and typewriting.

Rankings of the Four Types of Articles in the Classification Area of Basic Business (Table LII, page 83). According to the data presented in Table LII, page 83, the rankings received by the four types of articles in the classification area of basic business were significant at the .001 level. Therefore, hypothesis 3 a. (there is no significant

difference in the rankings of the four types of articles summarized from the classification area of basic business) may be rejected.

TABLE LII

BUSINESS TEACHERS' RANKINGS OF THE FOUR TYPES OF
ARTICLES SUMMARIZED IN THE CLASSIFICATION
AREA OF BASIC BUSINESS

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
1	3	4	2	1
2	1	4	2	3
152	2	3	4	1
153	4	2	3	1
Sum of Ranks	429	393	424	284
Average Rank	2.80	2.57	2.77	1.86
$\chi^2_r = 53.71^*$	d.f. = 3			p < .001

*Significant at the .001 level

Table LII contains the findings of the business teachers' rankings of the four types of articles summarized (research oriented,

"how to do," teaching aids and materials, and general information) in the classification area of basic business. As indicated by the sum of ranks and the average ranks in Table LII, the type of article in the basic business classification area which was most preferred to be read was the general information article. It received an average rank of 1.86. Second in reading preference was the teaching aids and materials article with an average rank of 2.75. The "how to do" article was third in reading preference with an average rank of 2.77. The type of article that was least preferred to be read was the research-oriented article with an average rank of 2.80.

Rankings of the Four Types of Articles in the Classification Area of Bookkeeping and Accounting (Table LIII, page 85). Hypothesis 3 b. (there is no significant difference in the rankings of the four types of articles summarized from the classification area of bookkeeping and accounting) may be rejected on the basis of the findings presented in Table LIII, page 85.

Table LIII reports the findings of the business teachers' rankings of the four types of articles summarized in the classification area of bookkeeping and accounting. As indicated by the sum of ranks and the average ranks in Table LIII, the type of article in the classification area of bookkeeping and accounting which was most preferred to be read was the research-oriented article. It received an average rank of 2.20. Second in reading preference was the "how to do" article with an average rank of 2.23. The general information article was third in reading preference with an average rank of 2.58. The type of article that was least preferred to be read with the teaching aids and materials article with an average rank of 2.99.

TABLE LIII
 BUSINESS TEACHERS' RANKINGS OF THE FOUR TYPES OF
 ARTICLES SUMMARIZED IN THE CLASSIFICATION
 AREA OF BOOKKEEPING AND ACCOUNTING

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
1	2	1	3	4
2	3	4	1	2
152	3	4	1	2
153	2	4	3	1
Sum of Ranks	337	458	341	394
Average Rank	2.20	2.99	2.23	2.58
$\chi_r^2 = 37.74^*$		d.f. = 3		$p < .001$

*Significant at the .001 level

In the other four classification areas, the general information article and the teaching aids and materials article were ranked either number one or number two in reading preference. The "how to do" article and the research-oriented article were ranked either number three or number four in reading preference. As revealed in Table LIII, page 85, this was reversed in the bookkeeping and accounting classification area. The research-oriented article and the "how to do" article were

ranked number one and number two in reading preference rather than number three and four.

Rankings of the Four Types of Articles in the Classification Area of Clerical Program (Table LIV, page 86). Hypothesis 3 c. (there is no significant difference in the ranking of the four types of articles summarized from the classification area of clerical program) may be rejected on the basis of the evidence reported in Table LIV.

TABLE LIV

BUSINESS TEACHERS' RANKINGS OF THE FOUR TYPES OF
ARTICLES SUMMARIZED IN THE CLASSIFICATION
AREA OF CLERICAL PROGRAM

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
1	4	2	3	1
2	1	3	2	4
152	4	2	1	3
153	4	2	3	1
Sum of Ranks	510	374	379	266
Average Rank	3.33	2.45	2.48	1.74
$\chi_r^2 = 117.77^*$	d.f. = 3			$p < .001$

*Significant at the .001 level

Table LIV contains the results of the business teachers' rankings of the four types of articles summarized in the clerical program classification area. The average ranks of the four types of articles in Table LIV indicate that in the clerical program classification area the general information article was ranked number one (1.74) in reading preference, teaching aids and materials article number two (2.45), "how to do" article number three (2.48), and the research-oriented article number four (3.33). The difference between the rankings of these four types of articles was significant at the .001 level.

Rankings of the Four Types of Articles in the Classification Area of Stenographic Program (Table LV, page 88). On the basis of the findings reported in Table LV, page 88, hypothesis 3 d. (there is no significant difference in the ranking of the four types of articles summarized from the classification area of stenographic program) may be rejected.

Table LV contains the results of each business teachers' rankings of the four types of articles summarized in the stenographic program classification area. According to the data in Table LV, there was a significant difference (.001) in the rankings received by the four types of articles summarized in the stenographic program classification area.

The average ranks of the four types of articles reveal that in the stenographic program classification area the general information article was ranked number one (1.75) in reading preference, teaching aids and materials article number two (2.39), research-oriented article number three (2.86), and the "how to do" article number four (3.00).

Rankings of the Four Types of Articles in the Classification Area of Typewriting (Table LVI, page 89). Hypothesis 3 e. (there is no significant difference in the ranking of the four types of articles

summarized from the classification area of typewriting) may be rejected according to the data reported in Table LVI.

TABLE LV
BUSINESS TEACHERS' RANKINGS OF THE FOUR TYPES OF
ARTICLES SUMMARIZED IN THE CLASSIFICATION
AREA OF STENOGRAPHIC PROGRAM

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
1	2	4	3	1
2	4	2	3	1
152	3	2	4	1
153	4	1	3	2
Sum of Ranks	437	365	460	268
Average Rank	2.86	2.39	3.00	1.75
$\chi^2 = 87.81^*$	d.f. = 3		p < .001	

*Significant at the .001 level

Table LVI contains the results of each business teachers' rankings of the four types of articles summarized in the typewriting

classification area. There was a significant difference (.001) in the rankings received by the four types of articles summarized in the classification area of typewriting.

TABLE LVI
BUSINESS TEACHERS' RANKINGS OF THE FOUR TYPES OF
ARTICLES SUMMARIZED IN THE CLASSIFICATION
AREA OF TYPEWRITING

Individual Teacher	Type of Article			
	Research Oriented	Teaching Aids and Materials	"How to Do"	General Information
1	2	3	4	1
2	4	1	3	2
152	3	2	1	4
153	4	3	1	2
Sum of Ranks	421	338	423	348
Average Rank	2.75	2.21	2.77	2.27
$\chi^2_r = 24.67^*$	d.f. = 3			p < .001

*Significant at the .001 level

According to the sum of ranks and the average ranks in Table LVI, the type of article most preferred to be read was the teaching aids and

materials article. It had an average rank of 2.21. Second in reading preference was the general information article with an average rank of 2.27. The research-oriented article was third in reading preference with an average rank of 2.75. The type of article that was least preferred to be read was the "how to do" article with an average rank of 2.77.

Tables for Each Area of Classification Containing the Frequency and Percentage of Each Rank Received by the Four Types of Articles (Tables LVIII, LIX, LX, LXI and LXII--pages 128-132). Appendix E, pages 127-132, contains raw data tables for each of the five individual areas of classification. These five tables reveal the frequency and percentage of each of the four ranks, 1, 2, 3, and 4, given to each of the four types of articles in each area of classification. Included in each of the tables are the average ranks and the over-all ranks of the four types of articles which were summarized in each area of classification.

Descriptive Data on Frequency of Each Rank for the Four Types of Articles

Table LVII, page 91, contains the total number and percentage of each of the four ranks, 1, 2, 3, and 4, received by the four types of articles. According to chance the expected percentage in each cell is 25 percent. This expected percentage assists in analyzing the results as reported in Table LVII.

The data reported in this table reveal that the general information articles received 41.31 percent of the number one (1) ranks. This also indicates that 41.31 percent of the total number of ranks received by

TABLE LVII

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4,
RECEIVED BY THE FOUR TYPES OF ARTICLES

Type of Article	Rank				Average Rank	Over-all Rank
	1	2	3	4		
Research Oriented	140 (18.30%)	158 (20.65%)	190 (24.84%)	277 (36.21%)	2.79	4
Teaching Aids and Materials	170 (22.22%)	205 (26.80%)	211 (27.58%)	179 (23.40%)	2.52	2
"How to Do"	139 (18.17%)	196 (25.62%)	224 (29.28%)	206 (26.93%)	2.65	3
General Information	316 (41.31%)	206 (26.93%)	140 (18.30%)	103 (13.46%)	2.04	1

the general information articles were number one (1) ranks. The "how to do" articles and the research-oriented articles received the smallest percentages of number one (1) ranks--18.17 percent and 18.30 percent, respectively.

The number two (2) ranks were distributed fairly similar to the percentage expected by chance. The research-oriented articles did receive fewer number two (2) ranks (20.65%) than expected. The other three types of articles received slightly more number two (2) ranks than expected.

The largest variance from the expected percentages of number three (3) ranks was by the general information articles. They received 6.7 percent less than expected. The "how to do" articles received 4.28 percent more number three (3) ranks than expected.

The teaching aids and materials articles and the "how to do" articles received approximately the percentage of number four (4) ranks expected. The research-oriented articles received 11.21 percent more number four (4) ranks than expected while the general information articles received 11.54 percent fewer number four (4) ranks than expected.

Of the total number of ranks received by the general information articles, 68.24 percent of the ranks were number one (1) and number two (2) ranks. Not one of the other three types of articles received as much as fifty percent of their total ranks from the number one (1) and number two (2) ranks. The number one (1) and number two (2) ranks received by the research-oriented articles constituted only 38.95 percent of their ranks.

The data tabulated in Table LVII, page 91, shows that most of the variances from the expected percentages occurred in the cells of the

research-oriented articles and in the cells of the general information articles. The "how to do" articles and the teaching aids and materials articles did not vary a great deal from the expected percentages. The largest variance from the expected percentage by these two types of articles was the percentage of number one (1) ranks received by the "how to do" articles.

The average rank for each type of article was as follows: research-oriented--2.79, teaching aids and materials--2.52, "how to do"--2.65, and general information--2.04. Therefore, according to the descriptive data contained in Table LVII, page 91,--as also indicated by the significant statistical findings in Table I, page 44,--the general information article was the type most preferred to be read by the secondary business teachers in Oklahoma. Second in reading preference was the teaching aids and materials article. The "how to do" article was third in reading preference. The research-oriented article was the least preferred to be read according to the rankings of the business teachers.

Summary

The major finding, as reported in Table I, was that there is a significant difference in the reading preferences of secondary business teachers in Oklahoma according to type of article. The general information article was the most preferred to be read. The teaching aids and materials article was second in reading preference. Third in reading preference was the "how to do" article. The least preferred to be read according to over-all rank was the research-oriented article.

Specific findings for each hypothesis will be summarized in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This chapter will be concerned with five areas: (1) a review of the study, (2) limitations, (3) findings, (4) conclusions, and (5) implications.

Review of the Study

The Problem of the Study

This study was concerned with the types of articles secondary business teachers prefer to read according to their ranking of selected articles summarized from such professional publications as the Balance Sheet, Business Education Forum, Business Education World, Delta Pi Epsilon Journal, and Journal of Business Education. These summarized articles were categorized into four types: research oriented, teaching aids and materials, "how to do," and general information.

The Purpose of the Study

The primary purpose of the study was to gather data from the secondary business teachers of Oklahoma in order to determine the types of articles they prefer to read as determined from their responses to summarized articles from business education periodicals. This data could be helpful in assisting the writers and editors of business education periodicals to better meet the reading preferences and needs of the

consumers of such educational literature--the business teachers. If the reading needs of the teachers are better served, this could help in obtaining the ultimate educational goal of business education periodicals--that of enabling the business teachers to better serve and assist in the educating of students.

The Procedures of the Study

Data for this study were derived from a personal data sheet and a questionnaire completed by the business teachers. The questionnaire consisted of 20 summarized articles and their titles. These articles were listed in groups of four under each of the five areas of classifications: (1) basic business, (2) bookkeeping and accounting, (3) clerical program, (4) stenographic program, and (5) typewriting. The four articles given under each classification consisted of one article of each of the four types: (1) research oriented, (2) teaching aids and materials, (3) "how to do," and (4) general information. The business teachers ranked these four articles from one to four under each separate classification according to their reading preferences.

Three different statistical tests were used in analyzing the data. The Friedman two-way analysis of variance by ranks and the Kruskal-Wallis one-way analysis of variance by ranks were used to test the hypotheses. The chi-square test and frequency and percentage tables were used to aid in further clarification of the data.

Limitations

Since this study, due to the length of the instrument, used summarized articles rather than the complete articles, caution should be used in generalizing the findings.

Also, the reading preferences obtained by this study were limited to those of secondary business teachers in the state of Oklahoma.

Findings

This study was concerned with determining the types of articles, as summarized from business education periodicals, secondary business teachers prefer to read. Three research hypotheses were developed to guide the conduct of the study. On the basis of the research findings of this study, the acceptance or rejection of the research hypotheses were as given below.

Hypothesis One

Hypothesis 1: the type of summarized article (1. research oriented, 2. "how to do," 3. teaching aids and materials, and 4. general information) has no differential effect on the reading preferences of secondary business teachers, was rejected on the basis of the findings of this study. As indicated by the sum of ranks in Table I, page 44, the general information article was the most preferred to be read. Second was the teaching aids and materials article. The "how to do" article was third in reading preference according to the rankings of the business teachers. The research-oriented article was fourth in reading preference as indicated by its sum of ranks.

Hypothesis Two

Hypothesis 2: the groups being compared (taking each variable below one at a time) do not differ significantly in their reading preferences as indicated by their ranking of summarized articles. (For each variable, the respondents were divided into two or more groups and then statistical comparisons were made.)

- a. Number of business education periodicals subscribed to and/or access to.
- b. Completion of at least one college course in educational research and/or educational statistics.
- c. Degree currently held.
- d. Number of years teaching experience.
- e. Sex.
- f. Age.
- g. Size of the secondary school in which the teacher is currently employed.
- h. Total number of class periods taught by the teacher per day in the area of business.
- i. The area of classification (a. basic business, b. bookkeeping and accounting, c. clerical program, d. stenographic program, and e. typewriting) in which the teacher does most of his teaching.

On the basis of the results obtained by this study, the second hypothesis was rejected when referring to variable a., number of business education periodicals subscribed to and/or access to. The "subscribed to" groups differed in their ranking of the research-oriented article at the .05 level. The group which subscribed to zero (0) business education periodicals gave the research-oriented articles the lowest average sum of ranks (highest reading preference). The group which subscribe to four (4) or more business education periodicals gave the

research-oriented articles the highest average sum of ranks (lowest reading preference).

The "access to" groups differed in their ranking of the teaching aids and materials articles at the .05 level. The group that has access to four (4) or more business education periodicals gave the teaching aids and materials articles the highest average sum of ranks (lowest reading preference).

Hypothesis two was also rejected when referring to e., sex, on the basis of the findings of this study. The male and female groups differed in their ranking of the teaching aids and materials articles at the .05 level. The female group preferred to read the teaching aids and materials articles more than did the male group.

When the second hypothesis specifically refers to: b., completion of at least one college course in educational research and/or educational statistics, c., degree currently held, d., number of years teaching experience, f., age, g., size of secondary school in which the teacher is currently employed, h., total number of class periods taught by the teacher per day in the area of business, and i., the area of classification in which the teacher does most of his teaching it was not rejected.

Hypothesis Three

Hypothesis 3: there is no significant difference in the ranking of the four types of articles summarized from the classification area of basic business (bookkeeping and accounting, clerical program, stenographic program, and typewriting), was rejected on the basis of the findings of this study.

The business teachers ranked the four types of articles significantly different (.001 level) under each of the five areas of classification. The type of article most preferred to be read in each area of classification was as follows: basic business--general information, bookkeeping and accounting--research oriented, clerical program--general information, stenographic program--general information, and typewriting--teaching aids and materials.

Conclusions

Inspection and interpretation of the study findings aided the formulation of certain conclusions by the investigator as detailed below.

Conclusion 1

Secondary business teachers' reading preferences regarding the articles in business education periodicals are dependent upon the type of article as evidenced by the respondents' ranking of the articles summarized from such publications.

Conclusion 2

Over-all, general information articles are the most preferred type of article to be read, and research-oriented articles are the least preferred to be read. The teaching aids and materials articles and the "how to do" articles are second and third, respectively, in the business teachers' reading preferences. This was evidenced by the Friedman two-way analysis of the business teachers' rankings of the 20 articles according to their reading preferences.

Conclusion 3

Based on the limited sample of this study, there is an indication that the more business education periodicals the business teacher subscribes to the less his reading preference for research-oriented articles. This was evidenced by the average sum of ranks given to the research-oriented articles by the "subscribed to" groups.

Conclusion 4

Women business teachers prefer to read teaching aids and materials articles more than do men business teachers as was evidenced by the difference in the two "sex" groups' average sum of ranks for teaching aids and materials articles.

Conclusion 5

As indicated in the findings of this study, the completion of a college course in educational research and/or educational statistics, degree held, number of years teaching experience, age, size of secondary school in which the teacher is employed, total number of class periods taught by the teacher per day in the area of business, and the area of classification in which the teacher does most of his teaching have no significant relationship to the type of article the business teacher prefers to read.

Conclusion 6

On the basis of the evidence of this study, one cannot conclude that there is or is not a significant relationship between the area of classification and the type of article preferred to be read in that

area. This is because more than one article of each of the four types would be needed in each separate area of classification to determine such a relationship.

Conclusion 7

Each of the four types of articles are needed in the business education periodicals to meet the reading preferences and needs of each individual business teacher. This was evidenced by the several number one (1) ranks received by each type of article as summarized in the frequency and percentage table.

Conclusion 8

A general type of article (general information by definition) will meet the reading preferences of more business teachers than will a more specific type of article (research oriented, "how to do," and teaching aids and materials by definition). Even though this study revealed the general information article is the most preferred to be read, it is important not to overlook the purpose of the more specific articles and how this purpose might influence the reading preferences of individual teachers. For example, two business teachers might differ greatly on their reading preference on a specific type of article but both might enjoy reading the same general type of article. This was evidenced by the rankings of the four types of articles (Table I and Table LVII) by the business teachers and by their comments concerning business education periodicals and the articles they contain (Appendix F). The general information articles did receive significantly more number one (1) ranks than the other four types of articles. However,

in their comments, several of the business teachers stated that they like to read articles relating to a specific problem or situation. Therefore, this conclusion must be weighed with the understanding that the more general type of article might logically appeal to more business teachers than would a more specific type of article.

Implications

On the basis of the data obtained by this study, the review of the literature, and the comments made by the business teachers certain implications relative for writers and editors of business education periodicals, educators, and further study were developed by the investigator.

Relative to the Writers and Editors of Business

Education Periodicals

If we can conclude that it is necessary for business teachers to stay abreast of current developments in their field and that research-oriented articles would help do this, and as research-oriented articles were ranked a poor fourth, it would seem that the following implications might have some merit for the writers and editors of business education periodicals.

1. Writers and editors of business education periodicals need to be aware of the business teachers' high reading preference for general information articles and their low reading preference for research-oriented articles. This knowledge implies that careful planning in the writing format of research-oriented articles, in particular, needs to be made. These articles need to be written in such a way as to make the data understandable

and usable for the readers. This also implies that writers and editors might put some research-oriented material in a more general format to help insure the article will be read by more business teachers.

2. The editors need to continue to do, and to increase in amount, their own market research surveys concerning the reading preferences and needs of their readers and strive to meet these preferences and needs.
3. The writers and editors need to continue and strengthen their awareness of the need for all types of articles to meet the many different individual needs of teachers. By using the knowledge of the types of articles teachers prefer to read as determined by this study, the writers and editors can work for a proper balance among the different types of articles.
4. The review of literature and the comments by the business teachers indicate the need for the writers and editors of business education periodicals to provide more articles that relate to the various levels of business education--elementary, secondary, post-secondary, and collegiate. The comments found in Appendix F also imply that articles can and should be written for school with different sizes of enrollments.

Relative to Educators

1. If the conclusion can be drawn that the research-oriented article is one satisfactory method to disseminate current research findings to secondary business teachers, certain implications can be made relative to educators.

- a. Educators need to continue to emphasize in their teacher education programs the necessity for teachers to keep abreast of current developments and research in their professional fields. It would appear they need to encourage even more vigorously that prospective business teachers read research-oriented articles, as well as other articles, throughout their careers.
 - b. Educators need to increase their efforts to teach student teachers how to read and interpret research-oriented articles, how to use periodicals as a resource to improve their over-all teaching.
2. Educators need to provide opportunities in their classrooms for student teachers to read and discuss, pro and con, the contents of the professional periodicals in relation to aiding the teacher in the classroom.
 3. Educators need to realize that the habit of professional reading and constructive use of professional periodicals can be developed by the prospective teachers while they are in college.

Relative to Further Study

1. Research using the complete article to determine reading preference is needed to substantiate or abrogate the findings of this study.
2. Research to determine if business education periodicals and their articles affect the business teacher and his classroom practices is needed.

3. Assuming the business teacher and his classroom practices are affected to some degree by the information contained in the business education periodicals, research is needed to determine what type of article is most likely to have a positive effect. It would be useful to know if the type of article most likely to have a positive effect on the business teacher correlates with the type of article the business teacher prefers to read as determined by this study.
4. Research concerning the development of professional reading habits is needed.
5. As the quality of the article may have an effect on the reading preference (as indicated by the reversed rankings from the normal order of the articles in the bookkeeping and accounting area), more indepth study is needed which would use more articles of each type to neutralize the effect that the quality of the article might have on reading preference.
6. Research is needed to determine if certain individual characteristics (educational statistics course, number of periods per day in business, etc.) have a relationship to the number of business periodicals a teacher subscribes to, a teacher's ranking of research-oriented articles, etc. A specific question that needs to be answered through such additional research is, "What are the individual and professional characteristics of a teacher who subscribes to no business education periodicals?"

Summary

The major purpose of this study was to determine the type of article secondary business teachers in Oklahoma prefer to read in business education periodicals. The findings of this study revealed that the type of article does have an effect on the business teachers' reading preferences. The general information article was the most preferred to be read and the research-oriented article the least preferred to be read.

On the basis of the statistical findings of the study, various conclusions and implications which related to the writers and editors of business education periodicals and to educators were stated. Also, suggestions for further research of related educational problems were given.

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APPENDIX A
LETTER OF INTRODUCTION AND REQUEST



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74074
(405) 372-6211, EXT. 258

April 8, 1972

Mr. John Doe
Business Teacher
Keyes High School
Keyes, OK 73947

Dear Mr. Doe:

Do business education periodicals contain articles that are helpful and interesting to you?

You, as a business teacher, can help clarify what Oklahoma business teachers wish to read in their business education periodicals. The enclosed form has been sent to a small representative group of Oklahoma high school business teachers. Please indicate your reading preferences by completing the form. Your completing and returning of the form will make a positive contribution to our profession.

Your response is important and you can be sure it will be kept confidential. Neither you nor your school will be identified in any way.

In order that the data can be processed and deadlines met, will you please staple and mail the self-addressed form by April 19, 1972? If you should like a copy of the results, they will be available later in the year.

During your next break, will you please take just ten minutes, have a cup of coffee, and indicate your reading preferences. Your assistance will be appreciated very much.

Sincerely,

Ron R. Hiner
Doctoral Candidate

John T. Bale, Jr.
Major Adviser

rb

Enclosures

APPENDIX B

PERSONAL DATA FORM AND QUESTIONNAIRE

READING PREFERENCES OF OKLAHOMA
HIGH SCHOOL BUSINESS TEACHERS

PERSONAL DATA FORM

Please check the business education periodicals which you subscribe to; also, those you do not subscribe to but do have access to for reading.

(S ___ = subscribe to, A ___ = access to for reading)

Business Education Forum	S ___ A ___	Balance Sheet	S ___ A ___
Business Education World	S ___ A ___	Today's Secretary	S ___ A ___
Delta Pi Epsilon Journal	S ___ A ___	Others _____	S ___ A ___
Journal of Business Education	S ___ A ___	_____	S ___ A ___
American Vocational Assoc. Journal	S ___ A ___	_____	S ___ A ___

Have you completed at least one college course in educational research or educational statistics? (This does not include tests and measurements at the undergraduate level.)

Yes ___ No ___

Check the highest degree received: Bachelors ____, Masters ____, Specialists ____, Doctors ____, Other ____

(please identify)

Number of years teaching experience including this year? ____

Check the range in which your age falls:

60 or above	___	30 to 39	___
50 to 59	___	20 to 29	___
40 to 49	___	below 20	___

Sex: Male ____, Female ____

Check the approximate enrollment of the high school where you are currently teaching:

1,000 or above	___	300 to 499	___
700 to 999	___	100 to 299	___
500 to 699	___	99 or below	___

What is the total number of class periods per day that you spend teaching business subjects? ____

What is the total number of class periods per day that you spend teaching subjects other than business? ____

Please check the one business area in which you do most of your teaching. If you are currently teaching in two or more business areas an equal amount of time, mark only the one area in which you normally prefer to teach. (If you check other, please identify the area.)

___ basic business (general business, basic business, consumer economics, economics, business law and business math)

___ bookkeeping and accounting (record keeping, bookkeeping and accounting)

___ clerical program (office machines, filing, data processing, office practice, clerical practice and cooperative office education)

___ stenographic program (shorthand, transcription, business English and secretarial practice)

___ typewriting (typewriting)

___ other-- (please identify) _____

READING PREFERENCES OF OKLAHOMA HIGH SCHOOL BUSINESS TEACHERS

Given below are the titles and summaries of four articles under each of the classifications of basic business, bookkeeping and accounting, clerical program, stenographic program, and typewriting.

After reading each summary under a classification like basic business, for example, rank the four articles according to your reading preference by circling the proper rank on the scale. The number 1 indicates the highest rank and 4 indicates the lowest rank.

SAMPLE:

BASIC BUSINESS

- A. Title and Summary 1 2 3 4
- B. Title and Summary 1 2 3 4
- C. Title and Summary 1 2 3 4
- D. Title and Summary 1 2 3 4

The sample above indicates that a business educator most preferred to read article D. The business educator least preferred to read article B.

Please complete the form below in the manner described above. Please do not omit any section.

TYPENITING

A. "THE TYPEWRITER AS A TOOL FOR IMPROVING SPELLING"

Experimental and control groups in ninth-grade typing classes were given pre- and post-tests to measure skills in spelling, typewriting (straight copy, rough draft copy, statistical), proofreading, word division, and composition at the typewriter. The experimental group which followed a 75-lesson spelling plan for 15 minutes a day showed evidence of significant superiority (ranging from .05 to .001 level of significance) in all areas tested except proofreading skill. An implication of the study is the need for typewriting teachers to include definite spelling lessons in typewriting classes.

1 2 3 4

B. "GIVE BEGINNING TYPISTS A HEAD START"

Individual attention is the primary means through which beginning students can be given a head start toward typewriting competency. Recorded lessons help free the instructor in large classes to instruct individual students as required. The use of records or tapes as "assistants" is discussed.

1 2 3 4

C. "TEACHING NUMBERS FIRST IN TYPENITING"

Because of the increased use of numbers, it is important for the student to be able to type numbers accurately and fluently. By presenting the numbers first in the teaching order, you find the students' motivation high and a positive attitude toward numbers. The author outlines her method of presenting numbers first. The first lesson is discussed in detail, and information concerning the materials and methods for the next five lessons is presented.

1 2 3 4

D. "MOTIVATION IN TYPENITING"

Motivation is defined and its importance established. Various examples of motivation are given. The author then lists four motivational aids with a short explanation of how they can be applied in typewriting.

1 2 3 4

STENOGRAPHIC PROGRAM

A. "TESTED TECHNIQUES IN TEACHING TRANSCRIPTION"

Employees today are asking business educators to vocationalize their teaching in order to prepare students to step into top-level secretarial positions immediately after graduation. The function of teachers of transcription is, in essence, to encourage students to strive for the production of a mailable transcript as the end result of the transcription process. The authors then explain ten techniques which have been used successfully to promote efficiency in transcription.

1 2 3 4

B. "HOW IMPORTANT ARE ACCURATE SHORTHAND OUTLINES?"

How do errors in the shorthand notes effect the transcript? Can students correctly transcribe shorthand outlines that are not written according to theory rules? A study was performed to answer these and other questions. The following is a summary of the findings.

The zero-order correlation coefficient between errors in shorthand notes and errors in the transcript was .768. This is significantly different from zero at the 1 per cent level. According to tables in the article, 299 errors were made. Four-fifths of the incorrectly written shorthand outlines were correctly transcribed. Of the 60 outlines leading to incorrect transcription, only 23 were wrongly written. Therefore, the r of .768 does not indicate a casual relationship but that the shorthand errors in the notes and the errors in the transcript are related to a third factor, intellectual capacity. In view of the findings, areas of needed concentration are quality of notes, speed in taking dictation, and speed and accuracy in transcribing rather than spending an appreciable amount of time requiring students to construct beautifully written shorthand outlines.

1 2 3 4

C. "IN SHORTHAND: WHAT ABOUT THE 20 PERCENT?"

The article describes a way of helping students master those infrequently encountered words that fall in the 20 percent range of usage. The author gives a list of these words and explains in detail how she uses them in shorthand class to improve the students' vocabulary.

1 2 3 4

D. "THE AUDIO LEARNING LAB IN SHORTHAND"

The audio learning lab has given real meaning to individualized instruction in shorthand. The teacher can multiply his effectiveness greatly by providing a tape library. The author gives the objectives of an audio learning library. He also lists and explains specific uses of shorthand tapes which are: (1) general instructions, (2) familiarity, (3) speed building, (4) transcription, (5) student self-evaluation, and (6) teacher-administered evaluation. Information concerning where to obtain various tapes is listed. The author explains how to make the lab effective and gives hints on making your own tapes.

1 2 3 4

CLERICAL PROGRAM

A. "WHAT WE SHOULD TEACH ABOUT CAREERS IN BUSINESS AND OFFICE OCCUPATIONS"

The role and responsibility of the business teacher in teaching about careers in his field is explored. The basic information a teacher should have on hand is listed. The author lists basic sources of information for the teacher and the student (the Occupational Outlook Handbook, Guidance in Business Education, etc). The titles, costs and where to obtain these sources are given. Magazines which can be used are also mentioned. Methods of disseminating career information are discussed as well as where to find information concerning trends in employment and opportunities for work in the state and community.

1 2 3 4

B. "SIMULATION IN OFFICE MACHINES"

A business office atmosphere is established by issuing each student individual attendance cards which were designed to simulate time cards used on the job. (The actual card is illustrated in the article.) The author explains and gives examples of how individual attention, realistic problems, and simulated time cards can accomplish what routine teaching methods could not have achieved for those difficult-to-reach students in the office machines class. Students get the "feel" of the office from an employee's viewpoint.

1 2 3 4

C. "A LEARNING SYSTEM FOR OFFSET DUPLICATION"

The article describes a multimedia learning system that can be used in office practice for teaching offset duplication. The system provided the following sequence of possible student activities: (1) Introductory reading assignment, (2) pre-test of student understanding, (3) a filmstrip was observed and notes taken, (4) programmed instruction booklet was completed, (5) project to provide experience at performing the tasks described in the preceding materials was to be completed, (6) review of the principles in steps 1, 2, 3, and 4 was provided, and (7) a post-test of student understanding was administered. Does the system work? Statistical analysis of the pre-test and post-test scores indicated that students made significant gains in achievement (.01 level of significance). In general the teacher and student reaction was favorable.

1 2 3 4

D. "OFFICE PRACTICE FOR THE '70s"

In order to prepare students for the '70s, we must look at changes that have taken place or are taking place and gear our program to take these changes into account. Composition at the typewriter, training in methods of processing data, stressing the "why" of office procedures and showing how business subjects fit together in business are changes taking place in the teaching of business subjects. Emphasis on communications skills, business procedures, where to locate facts, human relations, learning through experiences and individual assignments is the focus of office practice for the '70s.

1 2 3 4

BOOKKEEPING AND ACCOUNTING

A. "INTEGRATING DATA PROCESSING WITH ACCOUNTING"

We tend to teach about the machines, but not how accountants are actually involved with data processing. The author develops an exercise which will integrate data processing with accounting work. Examples of the following are given: (1) A chart of accounts for a fictitious company is developed, (2) a list of coded transactions are compiled, and (3) a list of questions to present to the students to enable them to learn the decoding process. In the process, students learn not only about data processing, but about the responsibilities of each department as well.

1 2 3 4

B. "A CRITIQUE OF BOOKKEEPING INSTRUCTIONAL CONTENT"

The author points out that at least 95 per cent of all recording is now done mechanically and increasingly by means of electronic data processing. Teachers are finding new excuses to teach wornout processing such as manual posting and journalizing. Teachers should not quit teaching the recording process, but they need to develop competency in getting along with the kind of recording and control that now operates--electronic processing of business activities. Little change has taken place in the content of bookkeeping during the past 75 years. If we continue in this vein, a valuable area of learning will be lost to business education and secondary school students.

1 2 3 4

C. "USE FLASH CARDS TO TEACH BASIC PRINCIPLES"

The value of flash cards is discussed. Examples of flash cards for asset accounts, liability accounts, proprietorship accounts, income accounts and expense accounts are shown. The author explains how to use the flash cards in class to serve as a motivating device and for variety of instruction to drill and review the basic principles of debit and credit in particular.

1 2 3 4

D. "BOOKKEEPING PRACTICE SETS--USEFUL REVIEW DEVICE"

The author statistically analyzes the review merits of using a bookkeeping practice set. A publisher's test was administered to the students before and after they had completed the three week practice set. The first time the test was given, the median score of 67 was at the 50th percentile. The second time the test was given, a median score of 73 was at the 70th percentile. According to the author, the idea that the use of practice sets in bookkeeping should help the students understand terms and facts which were only words previously is probably pointed out vividly by the statistics.

1 2 3 4

BASIC BUSINESS

A. "EQUAL EMPHASIS FOR GENERAL BUSINESS SUBJECTS"

The author asks the question: "Are we as teachers leaving the stifling confines of the textbooks and availing ourselves of materials outside the class text?" Given in the article are the names and sources of several current magazines, books, newspapers and movies which can be used as aids in general business subjects to present the overall view of the economy to the student.

1 2 3 4

Any comments you would make concerning business education periodicals and their articles will be appreciated. You may make your comments on the space below and on the next page.

B. "THE EFFECTIVENESS OF A SIMULATION LEARNING GAME IN TEACHING CONSUMER CREDIT TO SENIOR HIGH SCHOOL STUDENTS IN COMPARISON TO A CONVENTIONAL APPROACH TO INSTRUCTION"

The purpose of the study was to determine whether a simulation learning game is more effective than conventional classroom approaches in learning to acquire factual information about consumer credit, to compare sources of credit, and to select a basic credit contract. An analysis of variance for five criteria, IQ, age, knowledge test score, contrast rating score, and comparison frequency score, indicated no significant differences resulting from instruction by the two methods. However, the simulation learning game was more effective for teaching males and business education majors to compare available sources of credit before selecting a credit contract.

1 2 3 4

C. "ROLE-PLAYING AND SOCIODRAMA PROVIDE STUDENT INVOLVEMENT"

Students in general business have typically been given a passive role in the learning process. The author explains how dramatization, including role-playing and sociodrama, can be used to achieve active student involvement in general business. The steps to be followed in using these techniques are given and explained. Also, examples of general business role-playing and sociodrama situations to be used in the classroom are listed.

1 2 3 4

D. "CONSUMER EDUCATION: ARE STUDENTS AWARE?"

Business education departments are realizing the importance of offering consumer education courses that will assist our youth in sifting current information in order to make wise economic decisions. The author explores suggested topics for discussion (credit cards, advertising campaigns, food and clothing) that should be incorporated into consumer education courses. Possible instructional methods (meet with businessmen, examine advertising media, highlight problems with sociodramas, classroom demonstrations, field experiences, resource materials) are given and discussed.

1 2 3 4

Thank you. I appreciate your cooperation and effort on this work.

Please staple here and drop in mail

Mr. Ron R. Hiner

2008 Arrowhead Drive

Stillwater, OK 74074

APPENDIX C
POST CARD FOLLOW UP

April 20, 1972

Recently you received a form concerning your reading preferences. Your response is still very much needed. Having been a high school business teacher, I am aware of your busy schedule and understand why you have not yet been able to return the form.

Will you please take just a few minutes to indicate your reading preferences and return the completed form? Your assistance will be appreciated and future magazine articles could be affected by your response.

Ron R. Hiner, Doctoral Candidate
Oklahoma State University

APPENDIX D

A BIBLIOGRAPHY OF THE ARTICLES SUMMARIZED FOR THE
QUESTIONNAIRE AND A LISTING OF THE ORDER
OF THE FOUR TYPES OF ARTICLES

BIBLIOGRAPHY

In the Order the Articles Appear on the Questionnaire

TYPEWRITING

- A. Bartholome, Lloyd W. "The Typewriter as a Tool for Improved Spelling." Delta Pi Epsilon Journal, XII (February, 1970), 28-32.
- B. Beaumont, Lee R. "Give Beginning Typists a Head Start." Business Education Forum, XXV (March, 1971), 58-59.
- C. Graf, Jean E. "Teaching Numbers First in Typewriting." Journal of Business Education, XLVI (April, 1971), 281-282.
- D. Duncan, Charles H. "Motivation in Typewriting." Business Education Forum, XXV (March, 1971), 23-24.

STENOGRAPHIC PROGRAM

- A. Featheringham, Richard D., and Wheeler, Louise H. "Tested Techniques in Teaching Transcription." Business Education Forum, XXV (October, 1970), 18-20.
- B. Toler, Wilma Hayes. "How Important Are Accurate Shorthand Outlines?" Business Education World, LI (March-April, 1971), 14-15 and 26.
- C. Carter, Juanita E. "In Shorthand: What About the 20 Percent?" Balance Sheet, LII (May, 1971), 342-343.
- D. Lemaster, A. J. "The Audio Learning Lab in Shorthand." Business Education World, LI (September-October, 1970), 24-25.

CLERICAL PROGRAM

- A. Sparks, Mavis. "What We Should Teach About Careers in Business and Office Occupations." Business Education World, XLIX (May, 1969), 12-13 and 28.
- B. Schatz, Anne E. "Simulation in Office Machines." Journal of Business Education, XLVI (October, 1970), 17-18.

- C. Ivarie, Theodore. "A Learning System for Offset Duplication." Business Education Forum, XXIII (May, 1969), 22-24.
- D. Pearen, F. N. "Office Practice for the '70s." Balance Sheet, LII (February, 1971), 202-203 and 225.

BOOKKEEPING AND ACCOUNTING

- A. Barrett, Charles F. "Integrating Data Processing With Accounting." Journal of Business Education, XLVI (October, 1970), 21-22.
- B. Tonne, Herbert A. "A Critique of Bookkeeping Instructional Content." Journal of Business Education, XLVI (December, 1970), 106-108.
- C. Zaremba, Doris. "Use Flash Cards to Teach Basic Principles." Business Education Forum, XXV (December, 1970), 9-11.
- D. Gilmer, Larry L. "Bookkeeping Practice Sets--Useful Review Device." Balance Sheet, XLIX (April, 1968), 352 and 359.

BASIC BUSINESS

- A. Faidley, Ray A. "Equal Emphasis for General Business Subjects." Journal of Business Education, XLVI (March, 1971), 246-247.
- B. Anderson, Charles Raymond. "The Effectiveness of a Simulation Learning Game in Teaching Consumer Credit to Senior High School Students in Comparison to a Conventional Approach to Instruction." Business Education Forum, XXV (October, 1970), 24-25.
- C. Hopkins, Charles R. "Role-Playing and Sociodrama Provide Student Involvement." Business Education Forum, XXV (December, 1970), 54-55.
- D. Morrison, James L. Jr. "Consumer Education: Are Students Aware?" Business Education World, LI (May-June, 1971), 4-5.

A LISTING OF THE FOUR TYPES OF ARTICLES

In the Order the Articles Appear on the Questionnaire

TYPEWRITING

- A. Research Oriented
- B. Teaching Aids and Materials
- C. "How to Do"
- D. General Information

STENOGRAPHIC PROGRAM

- A. General Information
- B. Research Oriented
- C. "How to Do"
- D. Teaching Aids and Materials

CLERICAL PROGRAM

- A. Teaching Aids and Materials
- B. "How to Do"
- C. Research Oriented
- D. General Information

BOOKKEEPING AND ACCOUNTING

- A. "How to Do"
- B. General Information
- C. Teaching Aids and Materials
- D. Research Oriented

BASIC BUSINESS

- A. Teaching Aids and Materials
- B. Research Oriented
- C. "How to Do"
- D. General Information

APPENDIX E
FREQUENCY AND PERCENTAGE TABLES FOR THE
FIVE AREAS OF CLASSIFICATION

TABLE LVIII

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4,
RECEIVED BY THE FOUR TYPES OF ARTICLES IN THE
BASIC BUSINESS AREA OF CLASSIFICATION*

Type of Article	Rank				Average Rank	Over-All Rank
	1	2	3	4		
Research Oriented	20 (13.07%)	38 (24.84%)	47 (30.72%)	48 (31.37%)	2.80	4
Teaching Aids and Materials	36 (23.53%)	33 (21.57%)	45 (29.41%)	39 (25.49%)	2.57	2
"How to Do"	20 (13.07%)	47 (30.72%)	34 (22.22%)	52 (33.99%)	2.77	3
General Information	77 (50.33%)	35 (22.88%)	27 (17.65%)	14 (9.15%)	1.86	1

*Percentages may not total 100% due to rounding.

TABLE LIX

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4, RECEIVED BY
THE FOUR TYPES OF ARTICLES IN THE BOOKKEEPING AND
ACCOUNTING AREA OF CLASSIFICATION*

Type of Article	Rank				Average Rank	Over-all Rank
	1	2	3	4		
Research Oriented	53 (34.64%)	41 (26.80%)	34 (22.22%)	25 (16.34%)	2.20	1
Teaching Aids and Materials	21 (13.75%)	28 (18.30%)	35 (22.88%)	69 (45.10%)	2.99	4
"How to Do"	53 (34.64%)	36 (23.53%)	40 (26.14%)	24 (15.69%)	2.23	2
General Information	26 (16.99%)	48 (31.37%)	44 (28.76%)	35 (22.88%)	2.58	3

*Percentages may not total 100% due to rounding.

TABLE LX

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4,
RECEIVED BY THE FOUR TYPES OF ARTICLES IN THE
CLERICAL PROGRAM AREA OF CLASSIFICATION*

Type of Article	Rank				Average Rank	Over-All Rank
	1	2	3	4		
Research Oriented	12 (7.84%)	18 (11.76%)	30 (19.61%)	93 (60.78%)	3.33	4
Teaching Aids and Materials	28 (18.30%)	54 (35.29%)	43 (28.10%)	27 (17.65%)	2.44	2
"How to Do"	25 (16.34%)	52 (33.99%)	54 (35.29%)	22 (14.38%)	2.48	3
General Information	88 (57.52%)	29 (18.95%)	26 (16.99%)	11 (7.19%)	1.75	1

*Percentages may not total 100% due to rounding.

TABLE LXI

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4, RECEIVED
 BY THE FOUR TYPES OF ARTICLES IN THE STENOGRAPHIC
PROGRAM AREA OF CLASSIFICATION*

Type of Article	Rank				Average Rank	Over-All Rank
	1	2	3	4		
Research Oriented	26 (16.99%)	28 (18.30%)	41 (26.80%)	58 (37.91%)	2.86	3
Teaching Aids and Materials	36 (23.53%)	46 (30.07%)	47 (30.72%)	24 (15.69%)	2.39	2
"How to Do"	13 (8.50%)	32 (20.92%)	49 (32.03%)	59 (38.56%)	3.01	4
General Information	78 (50.98%)	47 (30.72%)	16 (10.46%)	12 (7.84%)	1.75	1

*Percentages may not total 100% due to rounding.

TABLE LXII

FREQUENCY AND PERCENTAGE OF EACH RANK, 1, 2, 3, and 4,
RECEIVED BY THE FOUR TYPES OF ARTICLES IN THE
TYPEWRITING AREA OF CLASSIFICATION*

Type of Article	Rank				Average Rank	Over-All Rank
	1	2	3	4		
Research Oriented	29 (18.95%)	33 (21.57%)	38 (24.84%)	53 (34.64%)	2.75	3
Teaching Aids and Materials	49 (32.03%)	43 (28.10%)	41 (26.80%)	20 (13.07%)	2.21	1
"How to Do"	28 (18.30%)	29 (18.95%)	47 (30.72%)	49 (32.03%)	2.76	4
General Information	47 (30.72%)	48 (31.37%)	27 (17.65%)	31 (20.26%)	2.27	2

*Percentages may not total 100% due to rounding.

APPENDIX F

COMMENTS FROM BUSINESS TEACHERS

Several of the business teachers took the opportunity to express their own views concerning business education periodicals. Their comments are edited and reproduced below. These comments were made in response to the last item on the questionnaire, "Any comments you would make concerning business education periodicals and their articles will be appreciated."

Since I am still new as a teacher, I enjoy articles that are along the line of "how to" or effective methods of presenting subject matter in an interesting way. The Balance Sheet and Business Education World are my favorites.

I like to read articles that are common, down to earth things which have been experienced, and which I can use in my classrooms to produce better trained students. I do not like to read someone's theoretical ideas whom have never taught in a high school classroom.

There is a greater need for the entrance of the human interest element in business education periodicals. Though we are business teachers, we get tired of the everlasting fact that is shot at us month after dull month. We like to know how others have achieved success--or how they have not!

A little attention to the words in the articles might help readership. None but the most stifling egghead can wade through some of these statistical monstrosities that pass for articles. Give us the facts. But couldn't they maybe be sugar-coated with a little emotion, a little feeling, a little human interest?...

Other teachers' experiences with their students interest me. So, too, other teachers' experiences with school administrators, or parents, or other teachers. Deliver me from statistics, and dull facts, and long columns of figures.

Most articles are about as good as the experience, knowledge, and capability of the writer. Many of the good articles are a result of experimentation and an application of workable ideas. Others, not so useful, are technical and out-of-touch with the classroom situation. We need more based on workable, down-to-earth ideas.

I would like to see more articles about note-hand, a relatively new subject--teachers' ideas, different techniques, things that have worked for them. I would like to see more practical application and less theory.

Generally very good, and especially so if they keep us in touch with what is happening at the national level; business trends, the newest in equipment, materials, and expectations of our students. I would like to see articles by high school teachers.

I prefer to read of new ideas or techniques. Statistics and past efforts--NO!

I am always searching for proven methods of approach to classroom situations that seem to eliminate "middle of road" approaches. Let's hear something for shorthand transcription, business law, and general business to break the monotony of everyday routine. "Today we'll have dictation, etc. What is meant by 'tort' in law class." I find current events hard to come by, especially for shorthand and accounting.

I read everything available on teaching shorthand... A variety of topics is best. If all were on the same vein, they would not be as valuable.

On the whole, I think the magazines and periodicals are good. Our library is very limited, but we do have a few of the older copies and they, too, are helpful even though many of the methods are outdated.

I prefer articles dealing with actual teaching experiences.

I like to hear about what other business teachers are doing in their classes, especially shorthand and typing. Methods, new ideas, and motivational devices are of real interest to me.

Since I am only a second-year teacher, I would enjoy more articles covering the "younger teacher" approach.

Too many articles tell us what we should be doing but not giving any information and/or suggestions as to how we should do it.

Most articles in the Business Education World and Balance Sheet are practical and down-to-earth but the Business Education Forum keeps us up-to-date on recent research and trends. We need both.

I enjoy articles on new approaches and new visual aids that can be prepared.

One thing I find very helpful in some periodicals is a section on "Tricks of the Trade." I would like to see more helpful hints given.

I would also like to see some bulletin board ideas presented with some of the articles. I feel that a good bulletin board can add a great deal to stress particular areas. I am not good at thinking up good ideas for bulletin boards, however.

I like to read articles that give me ideas I can readily use in my classroom. Detailed accounts of studies bore me!

I would like to see articles and ideas which can be utilized immediately into the classroom situation (ideas that are relevant and stimulating).

I have used periodicals through the years for many of my class projects. Many of the ideas presented as "Tricks of the Trade," etc., have helped tremendously in motivating students.

I like articles on motivation--business education puzzles or games--anything of interest to supplement the text book.

I would like to have more articles pertaining to "office machines."

More on "pure" economics.

...As far as I am concerned, I would like to see more articles that explain or discuss different things that can be done in the classroom. By the way, what does the business world have against the deaf. Do you realize we have articles and special books for the poor of seeing but nothing I have found for the deaf...Do you realize that all of our typing methods are geared for voice response. Can you picture calling t, t, t, and expecting the deaf student to know what you are saying?...Believe me, the school room is not like the professor's ideal. These students are smarter than they are given credit for.

Research type reports are especially good because they give a scientific, valid basis for the assumptions. However, less technical articles often contain good ideas and new ways of presenting instructional material. We need these, too.

I enjoy reading articles that make concrete suggestions or report new methods and techniques of teaching.

Articles should be short, complete and factual. Special consideration must be given small schools where business education has a very limited budget for acquiring classroom aids. They should be simple and easily obtained as many teachers in these schools have no "off" periods to search for or construct these so called "training aids."

Most articles are well written but they are not practical when you use them. Some are written for the large high schools. I have seen very few written for the high school in a small town.

We have not had many new ideas in the past few years. Most of the articles I have read in the past year have been very dull and of little value.

I find while a small percentage of the articles are interesting and informative, the majority seems to be something done by someone who has been required to write an article and really has no bearing on any classes but his own.

Most articles appear to be written for teachers in large schools or teachers in small schools with lots of money available for their use. What happens in the small schools with a minimum amount of money in the budget? There is certainly no way to develop classes that are suggested in the articles. I would like to see more articles about small town, small budget schools and what can be done by one (1) teacher to make the changes that are needing to be made.

More articles that could be used by a small, poor school.

Today's Secretary is not the magazine it used to be. I have found that it becomes less and less a magazine and more an advertising media.

So many of the articles do not pertain to a small high school. There are very good articles, however, and some are very useful.

I feel that teachers know about many of the sources of materials outside the text but they do not have the time to read it. If they do read the material, they find that they cannot incorporate it in their teaching. I do realize that everything one reads cannot be incorporated in the teaching area. But I think it depends on the size of the school the material is written for.

The business periodicals I receive are valuable teaching aids. I have a teaching file in which I keep all articles of interest (it is quite full!).

I was disappointed when the Today's Secretary was reduced in size. They eliminated several valuable sections. I use to take the Business Education Forum, but I did not find their articles particularly useful (this may have changed in the last few years).

Some times they are too geographically oriented. I mean they tend to stress only importance to certain areas.

Too much selling propaganda in the Balance Sheet.

We need some definite help for basic business courses. Help us with some encouraging improvements.

I have found the magazines extremely helpful.

I have found a newspaper, daily, to be of greatest service as a teaching device. I feel the value of relating the current topics to the classroom is important.

Since this is my first year at teaching business, I am not too familiar with some of these periodicals. However, I did have access to some of these in college and I like very much the Balance Sheet, Today's Secretary, and Business Education Forum.

Business teachers do not make use of business education periodicals as much as they should even though they are available.

Many teachers feel that the procedures outlined in business journals do not fit their particular situations.

I am convinced that periodicals are an asset to teachers. I enjoy reading articles in the periodicals I receive concerning business education. I find most of them to be helpful and interesting. I also like for my shorthand students to have access to magazines such as Today's Secretary, etc.

APPENDIX G
NUMERICAL TOTALS FOR ITEMS ON THE
PERSONAL DATA FORM

PERSONAL DATA FORM

Please check the business education periodicals which you subscribe to; also, those you do not subscribe to but do have access to for reading.
 *(S___ = subscribe to, A___ = access to for reading)

Business Education Forum	S <u>36</u> A <u>36</u>	Balance Sheet	S <u>113</u> A <u>38</u>
Business Education World	S <u>51</u> A <u>59</u>	Today's Secretary	S <u>37</u> A <u>58</u>
Delta Pi Epsilon Journal	S <u>15</u> A <u>11</u>	Others	S <u>13</u> A <u>3</u>
Journal of Business Education	S <u>30</u> A <u>48</u>		S ___ A ___
American Vocational Assoc. Journal	S <u>13</u> A <u>15</u>		S ___ A ___

Have you completed at least one college course in educational research or educational statistics? (This does not include tests and measurements at the undergraduate level.) 65 83
 Yes No

Check the highest degree received: Bachelors 85, Masters 67, Specialists 1,
 Doctors 0, Other 0 -- (please identify)

Number of years teaching experience including this year? 11.39 Average

Check the range in which your age falls:

60 or above	<u>1</u>	30 to 39	<u>50</u>
50 to 59	<u>30</u>	20 to 29	<u>40</u>
40 to 49	<u>31</u>	below 20	<u>0</u>

Sex: Male 32, Female 121.

Check the approximate enrollment of the high school where you are currently teaching:

1,000 or above	<u>45</u>	300 to 499	<u>24</u>
700 to 999	<u>11</u>	100 to 299	<u>44</u>
500 to 699	<u>13</u>	99 or below	<u>16</u>

What is the total number of class periods per day that you spend teaching business subjects? 4.25 Average

What is the total number of class periods per day that you spend teaching subjects other than business? 0.76 Average

Please check the one business area in which you do most of your teaching. If you are currently teaching in two or more business areas an equal amount of time, mark only the one area in which you normally prefer to teach. (If you check other, please identify the area.)

20 basic business (general business, basic business, consumer economics, economics, business law and business math)

15 bookkeeping and accounting (record keeping, bookkeeping and accounting)

22 clerical program (office machines, filing, data processing, office practice, clerical practice and cooperative office education)

23 stenographic program (shorthand, transcription, business English and secretarial practice)

71 typewriting (typewriting)

-- other-- (please identify) _____

*Average number subscribed to = 2.01

Average number access to = 1.75

VITA

Ronald Robert Hiner

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF SELECTED OKLAHOMA SECONDARY SCHOOL BUSINESS TEACHERS' READING PREFERENCES ACCORDING TO TYPES OF ARTICLES SUMMARIZED FROM BUSINESS EDUCATION PERIODICALS

Major Field: Business Education

Biographical:

Personal Data: Born near Keyes, Oklahoma, January 2, 1942, the son of Norville Ray Hiner, Sr. and Hazel E. Hiner.

Education: Graduated from Keyes High School, Keyes, Oklahoma, in May, 1960; received the Bachelor of Arts degree in Business Education from Panhandle State College in May, 1964; received Master of Science degree in Student Personnel and Guidance from Oklahoma State University in July, 1968; completed requirements for the Doctor of Education degree in Business Education at Oklahoma State University in July, 1973.

Professional Experience: Business instructor at Balko High School, Balko, Oklahoma, 1964-1967; Dean of Students and business instructor for Panhandle State College, Goodwell, Oklahoma, 1968-1970; graduate teaching assistance and part-time instructor for the College of Business Administration at Oklahoma State University, Stillwater, Oklahoma, 1970-1972; assistant professor at Panhandle State College, Goodwell, Oklahoma, 1973.

Professional Organizations: Delta Pi Epsilon, Beta Gamma Sigma, Phi Delta Kappa, Oklahoma Education Association, National Business Education Association, Oklahoma Business Education Association, and Mountain-Plains Business Education Association.