

AFIT/GCM/LAL/97S-1

AN INVESTIGATION OF PRIORITIZING RESEARCH
TOPICS IN PROFESSIONAL COMMUNICATION

THESIS

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AFIT/GCM/LAL/97S-1

19971007 022

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Presented to the Faculty of the Graduate School of Logistics
and Acquisition Management of the
Air Force Institute of Technology
Air University
Air Education and Training Command

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Contracting Management

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September 1997

Approved for public release; distribution unlimited

Acknowledgments

This research would not have been possible without the assistance of several individuals. I am forever indebted to my research advisor, Dr. Kim Sydow Campbell, for her wisdom, guidance, and extreme patience as I struggled through both the thesis process and this research project. I would also like to thank my reader, Dr. Guy Shane, for providing critical insight into the methodology and analysis of the data and for his constructive use of the editing pencil. I am especially appreciative of all the help provided throughout the entire AFIT experience by my fellow "GCMers" who gave freely and willingly of their time, expertise, and, most importantly, support and friendship. I am very proud to be a member of this class.

I cannot adequately thank my family. Their love and support carried me through-out the entire year-and-a-half. Linda, Adam, and Justin, I love you all very much.

Richard G. Buschagen

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Abstract

This research explored which areas and methods of research need to be identified and developed to most effectively communicate business and technical information. The research was sparked by the current literature which indicates that a gap exists between academicians, who do most of the research, and practitioners, who utilize the research results. This effort was intended to address possible causes of this problem by establishing the importance of nine research topic areas, six data collection methods/sources, and three data analysis methods for both academicians and researchers and other demographic characteristics. The research concludes that the participants generally agreed on which factors were most important. Findings indicated that researchers and practitioners tended to agree on data analysis methods and data collection methods/sources but did show some disagreement on research topic areas. The research also uncovered evidence that demographic characteristics such as level of degree, area of degree, job, and English as a first language may influence which factors are considered to be most important to the professional communication process.

AN INVESTIGATION OF PRIORITIZING RESEARCH TOPICS IN PROFESSIONAL COMMUNICATION

I. Introduction

Background

Technical communicators seem to be in agreement that it is important to expand the body of research in the field of professional communication. Campbell cites an editorial written by Frank Smith in 1992 and published in a special issue of *Technical Communications* in which he listed four reasons additional research in the field of professional communication is needed (1997:521):

- To help achieve professional status
- To avoid reinventing the wheel
- To help develop a body of literature
- To avoid working mostly by intuition and guess

In a survey of Society for Technical Communications (STC) practitioners, Beard and Williams found that two-thirds of the respondents indicated strong agreement with the statement that "technical communication needs to substantially increase the body of its research" (1992:575).

Unfortunately, Beard and Williams' survey also showed that the same respondents read little research in the field. In addition, that survey did not assess the importance of specific topic areas for research in technical communication (Campbell, 1997:1). The conclusion of these authors was that "more research needs to be done in this area if we hope to narrow the gap between researchers and practitioners in the field" (1992:580). The focus of this thesis is to identify what areas of research are most needed to develop a clearer understanding of the most effective means of communicating business and technical information.

Problem

Successful communication of business and technical information from the researchers to the practitioners may be determined by a variety of factors which directly and indirectly influence the professional communication field. Factors, such as educational level, field of degree, current job, and English as a first language, may directly influence what projects researchers will pursue and what research practitioners will read. Indirect influences, such as age and gender, may also influence each individual in substantially the same way. If these factors do indeed influence the communication of business and technical information, then identification of these theoretical

catalysts may influence researchers to pursue projects utilizing certain research topic areas, data collection methods/sources, and data analysis techniques deemed to be most important by the practitioners.

Objective

The present study will specifically examine the relationships between these direct influences and the importance of nine research topic areas, six data collection methods/sources, and three data analysis methods for both academics and practitioners. The objective of this research is to investigate whether there appears to be any significance to particular individual characteristics in communication professionals which may influence these factors to be considered as possible determinants of successful communication of business and technical information. Specifically, education level, field of degree, job title, and English as a first language will be studied in this research effort. Indirect factors, such as age and gender, will not be examined in the results of this effort. These direct factors will be compared to the research topic areas, data gathering methods/sources, and data analysis methods to determine the extent to which researchers understand the effectiveness of their efforts in

communicating the information to the practitioners who might make use of those research results.

Justification

Many of the demands met by researchers today are not significantly different from the pressures faced by those in the professional communication field at any time. Money, time, personnel, and other limited resources, have always been constraints within which researchers worked. Therefore, faced with these limited resources, the research community as a whole is responsible to pursue meaningful projects that are deemed to be most important by the practitioners. Research plays a vital role in all aspects of professional communication and it should emphasize the unique importance of the practitioners serving in it. This research is an attempt to help increase the understanding of researchers in professional communication with the needs and desires of the career practitioners.

Questions

Through a survey of professional communication researchers and practitioners, this study intends to answer the following general research questions in an attempt to determine the basis for an accurate descriptive model of how

researchers and practitioners differently perceive professional communication.

1. What types of research do practitioners perceive to be the most importance to fulfilling their professional goals? Specifically, are particular research topic areas, data collection methods/sources, and data analysis methods more important than others for their purposes?
2. Do researchers in the career field agree on what research topic areas, data gathering methods/sources, and data analysis methods define a successful research project? Do the attitudes and perceptions of the researchers tend to agree with the practitioners or are they significantly different?
3. To what extent does educational level, field of degree, job, and English as a primary language effect the views of the respondents to the survey? Does one factor influence the perception of the individual more than others?

The process of answering these questions requires the investigation of particular theoretical constructs to establish the existence of expected relationships between the variables under study. This research investigates the relationships between the general constructs of educational

level, field of degree, current job position, and English as a first language with the importance of research topic areas, data collection methods/sources, and data analysis methods.

Approach

The general approach taken in this research effort includes a review of relevant literature regarding the importance of research in professional communication. This review provides a framework for the development of a survey instrument directed at researchers and practitioners in the professional communication career field, soliciting their responses to items intended to measure the importance of types of research topic areas and methodologies fundamental to the field. The responses are combined, and grouped data are analyzed for significant trends which may establish a possible link between a particular item and its perceived importance to professional communication.

Limitations

This research is intended only to evaluate the factors presented as possible factors of professional communication preferences in the field. The information presented is not intended to be relevant to other subject areas. Although

some of the information provided may be generalizable across other professions, readers are cautioned as to the limited scope of this specific research.

Factors beyond the individual's control, such as age and gender, were not investigated as possible developmental determinants. While some may have significant effects on preferred research topic areas, data gathering methods/sources, and data analysis methods, they are not pursued in the course of this effort. Further, many theoretical determinants may exist which were not examined. Factors other than those under scrutiny here are left for further consideration and research.

II. Literature Review

Introduction

This review of relevant literature provides background information for evaluating the different approaches to communicating business and technical information. It is intended to grant some insight into the views of different sources of knowledge and theory. This review addresses the general notion of professional communication and the important issues that are common to the concept. It also investigates professional communication literature relevant to the research questions addressed in this study. This background forms the basis for a more rigorous evaluation of the professional communication subject.

Issues

When investigating the general topic of professional communication, some common issues are often repeated in the research and bear discussion here.

A common thread in virtually all informed views on professional communication is the concept of the relationship between the nature of the research being performed and its link with practical application. The necessary meshing of technical communication research and

its applicability for practitioners can best be summed up by Pinelli and Barclay's comments as follows:

The function of research in technical communication continues to evolve and expand. As technical communication matures, interest grows in strengthening the role of research, solidifying and improving the research base, and making technical communicators more aware of the importance of research.

Given its increasing significance, research in technical communication merits regular review. Careful attention and review should stimulate further thought and debate about the role of research in a field that is dominated by practitioners. (Pinelli and Barklay, 1992:526)

Pinelli and Barclays' position supports the idea that research in professional communication needs to be structured and prioritized to benefit both the researcher and the practitioner.

A second issue common to professional communication literature is the absence of methods to communicate the results of the research to practitioners in a meaningful way. Again, Pinelli and Barklay:

Another viewpoint holds that in technical communication there is simply too little interaction between the community of researchers and theoreticians and the community of practitioners.

Specifically, there is far too little interaction between the academic community, where the bulk of the researchers and theoreticians abide, and the environment in which technical communication practice takes place, the world in which the practitioners reside.

Few mechanisms exist for the transfer of research results between the two group... (1992:530)

According to the results of the Beard and William's study, practitioners "spend little time reading technical

communication studies published in the field's major academic journals. With the exception of *Technical Communication*, practitioners spend little time reading the publications in their field" (1992:579).

Literature

Research, industrial as well as academic, ought to have application to actual problems (Rainey and Kelly, 1992: 552). All of the literature seems to agree on this one point. The knowledge gained in the academic institution must be applicable to the workplace, where it really matters, and must be effectively communicated to the potential users. Much of the literature on professional communication emphasizes this point. Rainey and Kelly clearly support this argument:

These observations do not mean that "pure" or "basic" research should be abandoned as useless; they suggest only that any researcher, whether consuming public or private resources, should demonstrate the utility or future implications of the work. In the case of basic research, the researcher should at least show how the work lays a foundation or contributes a step towards future research that ultimately will benefit society in some concrete way. (1992:553)

Others have tackled the argument as well. Beard and Williams concluded:

Our findings make it clear that practitioners value research and would like to see more research pertaining to their needs. It is also clear that they do not read much of the current research published in the field. We infer that they do not see reading the literature in

technical communication as relevant to their needs.
(1992:580)

Beard and Williams recommend more research be done in this area if we hope to narrow the gap between researchers and practitioners. They establish the foundation for this research by suggesting that we need to find out what kind of research topics practitioners find valuable and compare their responses to what is being published in the field on a regular basis. Further, they suggest additional research to identify methodologies of interest to practitioners (1992: 580). Again, this study is an attempt to advance their initial research.

Summary

This literature review explored the field of professional communication and some of the major issues affecting the various approaches to research and the practical application of that information. It is clear from this review that a consensus exists establishing a gap between academics, those who do most of the research, and practitioners, who might make use of those research results. There appears to be no disagreement in the literature on that point. However, there is some disagreement on why this gap exists. This research effort attempts to identify and

discuss reasons for this gap between these two groups of professional communicators.

III. Methodology

Introduction

This chapter presents the design and methodology of this research effort. Included in this chapter is an identification of the population and sample segment participants, an explanation of the procedures followed, an examination of the survey instrument utilized, a discussion of the instrument validity, an overview of data analysis, and a review of the limitations of this study.

Often the most valuable resource for data concerning a human resource topic such as professional communication is the population of individuals directly affected by the issue (Alreck, 1995:5). Their attitudes and perspectives regarding the various aspects of the subject matter may be the most germane inputs to the research effort. The knowledge and experience of subscribers to the IEEE's *Transactions on Professional Communication* participating in this study represents a primary source for the required data.

Therefore, research for this effort was conducted through survey and analysis of the personal opinions and perceptions of both practitioners and academics involved in the communication of business and technical information to determine those factors and attributes which contribute

significantly to determining effective professional communication. These factors are presumed to include attributes related to level of degree earned, field of degree, job title, and whether English is a person's first language. The instrument used in this research was developed as a questionnaire designed to capture several types of information. The survey was directed at professional communicators.

Participants

The population of interest for this research effort consists of all individual subscribers to IEEE's *Transactions on Professional Communication* who have an E-mail address listed in the IEEE subscriber database. As of 1 July 1995, there were 927 such subscribers. This number represents 48.5% of the 1,910 total individual subscribers listed in the database.

Instrument

The survey instrument was directed at the sample of individual subscribers and consisted of four main groups of questions addressing the topics of demographics, areas of research, sources of or methods of collecting data, and methods of analyzing data. An additional group of questions

regarding specific components of an issue of the journal was included, but will not be evaluated directly in this paper.

The demographic questions were simply intended to establish the extent of the participant's educational levels, field of degree, current position, and English as a first language. These questions helped to categorize respondents in terms of their professional field, academic education, practitioner vs. academic, and first language. Responses were numerically coded for ease of evaluation and comparison.

The next group of questions addressed the individual's attitudes regarding the importance of particular research topic areas for advancing the practice of communicating business and technical information. Items within this group are listed in Table 1.

Table 1. Research Topic Areas Assessed

Professional communication Research Areas	Examples of More Specific Sub- Topics
Collaborative & Organizational Processes	<ul style="list-style-type: none"> • editing • teams • co-authoring
Specialized Discourse Media/Types	<ul style="list-style-type: none"> • negotiations • presentations • proposals • instructions • help files • e-mail
Document Design, Graphics, Multimedia	<ul style="list-style-type: none"> • page layout • graphics • audio • screen design
Specialized Discourse in a Profession/Field	<ul style="list-style-type: none"> • business • engineering • science • environment/risk
Teaching & Training	<ul style="list-style-type: none"> • curriculum • methods • materials
Reading & Writing Processes	<ul style="list-style-type: none"> • decoding • chunking • planning • composing

	<ul style="list-style-type: none"> • revising
International & Cultural Issues	<ul style="list-style-type: none"> • styles/preferences • translation • ethics
Management	<ul style="list-style-type: none"> • project management • quality • communication style
Professional Trends & Issues	<ul style="list-style-type: none"> • history • educational programs • salaries

These questions were developed by adapting two existing taxonomies for categorizing research topics in professional communications: (1) the one used in the 1995 Association of Teachers of Technical Writing (ATTW) Bibliography (Philbin, 1996:439-441) and (2) the one used in Rainey and Kelly's analysis of dissertations in technical communication during 1965-1990 (1992:558-559) (Campbell, 1997:3). Survey respondents were asked to indicate the importance of these nine research topic areas in two ways. First, the items utilized a 5-point Likert-type response scale ranging from 1=No Importance to 5=Great Importance. Mean scores were derived within each category. Secondly, these items utilized a forced ranking scale constructed of the nine reasonable alternatives within the research topic areas, with each item ranked in the order of importance for advancing the practice

of communicating business and technical information. Because the items are presented as possible alternatives or choices, the forced ranking indicates what the respondent's choices are likely to be within each category (Alreck, 1995:121). Responses were transformed into proportion-selected scores that summed to 100 percent within each category. All nine choices were required to be ranked, and ties were not allowed. Thus, both interval and ordinal data for assessing the importance of various research topic areas was obtained.

The third and fourth group of questions attempted to measure how important the different methods for collecting and analyzing data are for research seeking to advance the practice of communicating business and technical information. The items for these two areas were developed by reviewing a number of research methods textbooks (Emory and Cooper, 1995; Watt and van den Berg, 1995; and Zimmerman and Muraski, 1995) (Campbell, 1997:4). Table 2 shows the data collection and data analysis methods which were included in these items.

Table 2. Research Methods Areas Assessed

Data Collection Methods/Sources
Observation where participant behavior is mostly self-determined (whether conducted in work settings or laboratories)
Experiments where participants' behavior is mostly determined by the researcher (whether conducted in work settings or laboratories)
Interviews of individuals (whether done via telephone or face-to-face or satellite video/audio)
Group interviews (e.g., focus groups, nominal-group technique, Delphi technique)
Surveys (whether done via mail or e-mail or web)
Documents (e.g., policy manuals, computer documentation, help memos)

Data Analysis Methods
Qualitative descriptions of categories, patterns, etc. based on pre- existing theory (e.g., categorization of all errors into one of four types based on theory of cognitive load in a usability test of two versions of on-line help)
Qualitative descriptions of categories, patterns, etc. NOT based on pre- existing theory(e.g., categorization of all errors into one of four types based on the researcher's opinion in a usability test of two versions of on-line help)
Quantitative/statistical analysis (e.g., relationship between age of subject and type of error in a usability test of two versions of on-line help)

Respondents assessed research methods as they had research topic areas: (a) by assigning a level of importance to each method using a 5-point Likert-type scale ranging again from 1=*No Importance* to 5=*Great Importance* and, (b) by ranking the six methods for collecting data and the three methods for analyzing data in order of importance for advancing the practice of communicating business and technical information. Means and proportion-selected scores were developed for the Likert-type scale items and the forced ranking items, respectively. Thus, again, the instrument elicited both interval and ordinal data for assessing the importance of various research methods.

Validity

The survey instrument was validated through a pilot study conducted with communications experts and survey research experts including members of the Air Force Institute of Technology faculty. These experts evaluated the survey instrument for content validity. The results of the pilot study culminated in the final version of the survey instrument used in this study.

Procedures

The survey was sent directly via e-mail to the 927 individual subscribers in the sample group. Each message contained the survey instrument along with instructions for saving, editing, and returning the survey to the researcher. In order to maximize participation, follow-up messages or reminders were sent according to the total design method (Dillman, 1978). Appendix A contains a complete copy of the survey instrument.

All responses received by the pre-established deadline were manually entered into digital form using *Microsoft Excel for Windows 95*, Version 7.0a, copyright 1985-1996 Microsoft Corporation. The digital file was then transferred to *SPSS for Windows*, Release 7.0, copyright 1989-1995 SPSS Inc., a statistical software program, for evaluation and analysis. This process allowed for the grouping of data by categories, the elimination of all names from the database, and the generation of a final data set consisting only of numerical responses. The data were then reviewed and analyzed for significant trends in responses regarding this study's research questions. The statistics generated consist of means, frequencies that were converted into proportion-selected scores, and Pearson correlations.

Limitations

Due to the nature of survey methods and behavioral science research, this study is based on assumptions about the data obtained, and is restricted by important limitations.

The assumptions made in this study are:

1. The sample of subscribers to the IEEE's *Transactions on Professional Communication* is representative of the population of both practitioners and academics in the professional communication field.
2. The data obtained are representative of the true relationships that exist between the variables examined and the real world.
3. The self-report answers are obtained from participants who understand the survey items and have responded accurately and truthfully.

The limitations of this study are:

1. Time and other resource constraints prevented an exhaustive evaluation of the entire professional communications field and all relevant communication issues. This study examines only the data received through the voluntary responses of survey participants.
2. As survey research, this study is limited by the

number and representativeness of respondents who elected to participate. Further, the survey instrument cannot determine causality of any relationship reported.

IV. Results and Analysis

Introduction

This chapter provides a description and analysis of the data collected in this research effort. A review of the response rates of the survey is followed by a detailed review of respondent characteristics. Finally, quantitative results of the statistical analysis of expected relationships is discussed. With respect to the general research questions proposed in this paper, specific investigative methods were implemented to further analyze the data collected. An explanation of these analyses follows.

Response

A total of 104 surveys were received before the cut-off date, providing an 11% rate of return from the 927 individual subscribers surveyed. The 927 individual subscribers are those with e-mail addresses listed in the IEEE subscriber data base and represent 48.5% of the total population of 1,910 individual subscribers to IEEE's *Transactions on Professional Communication*. The 104

respondents represent 5.5% of the total individual subscribers to the journal.

Participants

Evaluation of responses revealed demographic information about the characteristics of the individuals participating in this study. Thirty-seven of the respondents ($\approx 36\%$) had Bachelor's degrees while thirty-eight ($\approx 37\%$) had a Master's and twenty-six (25%) had a Doctorate. Three of the respondents ($\approx 3\%$) were undergraduates. Seventy-seven of the respondents ($\approx 74\%$) had English as their first language while twenty-seven ($\approx 26\%$) did not. Nineteen of the respondents ($\approx 18\%$) were classified as academicians while eighty-one ($\approx 78\%$) were considered to be practitioners. Four respondents ($\approx 4\%$) were full time students. Finally, thirty six of the respondents ($\approx 35\%$) had electrical engineering degrees, twenty-three ($\approx 22\%$) had some other engineering or computer science degree. Eleven ($\approx 11\%$) had business degrees, twelve ($\approx 11\%$) had degrees in English, ten ($\approx 10\%$) had degrees in either a natural science or math, nine ($\approx 8\%$) were classified as having "other" type degrees. Three respondents ($\approx 3\%$) were undergraduates and had no degrees. After the overall evaluation of the responses was accomplished, each

category was analyzed individually i.e. people with Bachelor degrees were analyzed separately from people with Masters degrees, academicians separately from practitioners, business majors separately from English majors, etc. Figure 1 shows the percentage of respondents broken out by the four main demographic characteristics. The responses of the full-time students were included in the over-all results but the category was not analyzed separately, due to the small number.

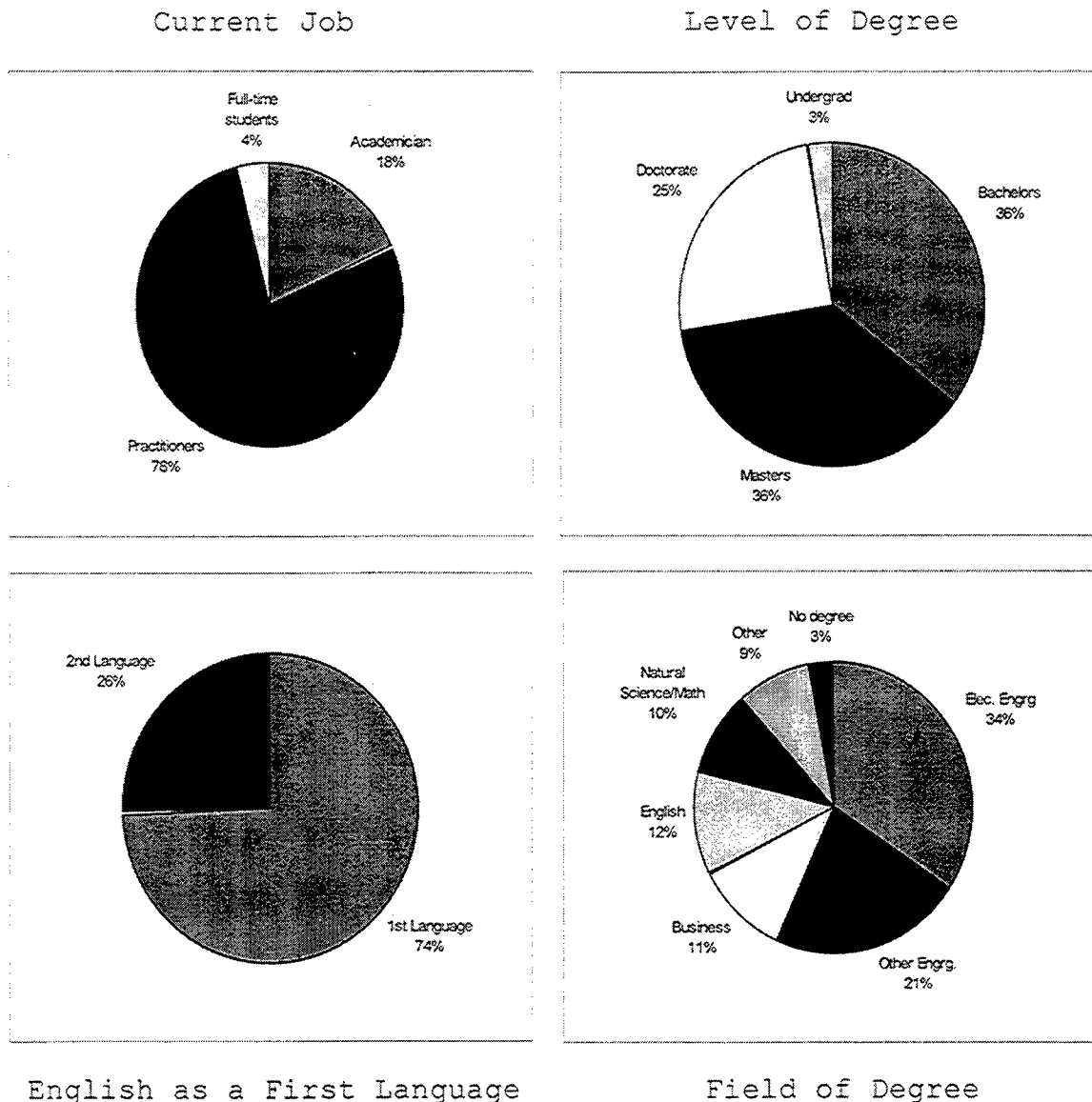


Figure 1. Demographic Characteristic Percentages

Quantitative Results

An analysis of responses to the forced rank items relevant to professional communication indicates that respondents participating in the survey tended to agree on several of the items they believed to be more important to

the career field. Respondents ranked items in the groups of research topic areas, data collection methods/sources, and data analysis methods.

Participants were somewhat varied in their ranking of research topic areas. Overall, "reading and writing processes" was ranked highest with 13.6% of the total possible research topic areas rank score. "Collaborative and organizational processes" and "specialized discourse media/types of communication" were tied for second most important overall with 12.7% each of the total possible rank score. One of these three topic areas was ranked number one for "most important" by every demographic classification except for field of degree. Those in business, mathematics and natural science, or other responded differently. "Communication management" at 14.6% and 16.7% was ranked as most important for people with business degrees and "other" degrees, respectively, and "document design, graphics, multimedia"" was considered to be "most important" with 16.4% of the possible rank score for that variable for people with natural science/mathematics degrees. "Professional trends and issues" consistently ranked as the "least important" research topic area both overall at 7.3% of the total possible rank score and by almost every category of demographic characteristics. Only respondents with degrees in business and the mathematics/natural science

fields had this area ranked higher than "least important". Business and mathematics/natural sciences fields had "professional trends and issues" ranked 6th and 7th, respectively. This item, "professional trends and issues," was positively correlated at .211 with the field of degree at the .05 significance level. "Reading and writing processes" was negatively correlated at -.222 with level of degree and "collaborative and organizational processes" was negatively correlated at -.228 with field of degree, both at the .05 significance level. Table 3 shows all nine forced ranking Research Topic Areas and the percentage of the total available rank scores earned by both overall and each individual demographic characteristic.

Table 3. Research Topic Areas Rankings

Category	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	6th Choice	7th Choice	8th Choice	9th Choice	Sample Size
Overall	Reading and Writing Processes 13.6%	Collaborative & Organizational Processes 12.7%	Specialized Discourse Media/Types 12.7%	Communication Management 12.3%	Document Design, Graphics, Multimedia 12.2%	Teaching and/or Training 11.6%	Specialized Discourse Profession/Field 9.1%	International and/or Cultural Issues 8.5%	Professional Trends and Issues 7.3%	103
Academician	Collaborative & Organizational Processes 14.8%	Reading and Writing Processes 14.0%	Specialized Discourse Media/Types 13.1%	Teaching and/or Training 12.3%	Document Design, Graphics, Multimedia 11.4%	Communication Management 10.8%	Specialized Discourse Profession/Field 10.1%	International and/or Cultural Issues 8.2%	Professional Trends and Issues 5.3%	19
Practitioner	Reading and Writing Processes 13.8%	Communication Management 12.7%	Specialized Discourse Media/Types 12.4%	Document Design, Graphics, Multimedia 12.4%	Collaborative & Organizational Processes 12.3%	Teaching and/or Training 11.3%	International and/or Cultural Issues 8.6%	Specialized Discourse Profession/Field 8.6%	Professional Trends and Issues 8.0%	80
Bachelor Degree	Reading and Writing Processes 15.0%	Communication Management 13.2%	Document Design, Graphics, Multimedia 13.1%	Specialized Discourse Media/Types 12.4%	Collaborative & Organizational Processes 12.0%	Teaching and/or Training 11.6%	Specialized Discourse Profession/Field 8.5%	International and/or Cultural Issues 7.1%	Professional Trends and Issues 7.1%	37
Masters Degree	Reading and Writing Processes 14.3%	Collaborative & Organizational Processes 12.7%	Document Design, Graphics, Multimedia 12.0%	Communication Management 11.9%	Teaching and/or Training 11.7%	Specialized Discourse Media/Types 11.5%	International and/or Cultural Issues 8.9%	Specialized Discourse Profession/Field 8.7%	Professional Trends and Issues 8.3%	37
Doctorate Degree	Specialized Discourse Media/Types 14.8%	Collaborative & Organizational Processes 14.2%	Communication Management 11.5%	Document Design, Graphics, Multimedia 11.4%	Reading and Writing Processes 11.1%	Teaching and/or Training 10.8%	International and/or Cultural Issues 10.1%	Specialized Discourse Profession/Field 9.6%	Professional Trends and Issues 6.5%	26
English 1st Language	Reading and Writing Processes 14.4%	Collaborative & Organizational Processes 12.6%	Specialized Discourse Media/Types 12.6%	Document Design, Graphics, Multimedia 12.6%	Communication Management 12.5%	Teaching and/or Training 11.2%	Specialized Discourse Profession/Field 8.4%	International and/or Cultural Issues 8.2%	Professional Trends and Issues 7.5%	76

Table 3. Research Topic Areas Rankings (cont.)

Category	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	6th Choice	7th Choice	8th Choice	9th Choice	Sample Size
English 2nd Language	Collaborative & Organizational Processes 13.0%	Specialized Discourse Media/Types 13.0%	Teaching and/or Training 13.0%	Communication Management 11.5%	Reading and Writing Processes 11.4%	Document Design, Graphics, Multimedia 11.1%	Specialized Discourse Profession/Field 11.0%	International and/or Cultural Issues 9.6%	Professional Trends and Issues 6.4%	27
Electrical Engineer	Reading and Writing Processes 13.8%	Collaborative & Organizational Processes 13.3%	Communication Management 13.0%	Specialized Discourse Media/Types 12.7%	Teaching and/or Training 12.5%	Document Design, Graphics, Multimedia 10.5%	Specialized Discourse Profession/Field 9.0%	International and/or Cultural Issues 9.0%	Professional Trends and Issues 6.2%	36
Other Engineer & Computer Science	Collaborative & Organizational Processes 15.8%	Reading and Writing Processes 14.5%	Document Design, Graphics, Multimedia 13.5%	Specialized Discourse Media/Types 12.4%	Teaching and/or Training 11.2%	Specialized Discourse Profession/Field 10.3%	Communication Management 10.2%	International and/or Cultural Issues 6.8%	Professional Trends and Issues 5.3%	23
Business	Communication Management 14.6%	Reading and Writing Processes 14.4%	Collaborative & Organizational Processes 12.4%	Teaching and/or Training 11.4%	Professional Trends and Issues 11.3%	Specialized Discourse Media/Types 10.6%	Document Design, Graphics, Multimedia 9.6%	Specialized Discourse Profession/Field 8.6%	International and/or Cultural Issues 7.1%	11
English	Specialized Discourse Media/Types 14.6%	Reading and Writing Processes 14.4%	Document Design, Graphics, Multimedia 13.9%	Collaborative & Organizational Processes 10.4%	Specialized Discourse Profession/Field 10.4%	International and/or Cultural Issues 10.4%	Communication Management 10.4%	Teaching and/or Training 8.5%	Professional Trends and Issues 7.0%	11
Natural Science & Math	Document Design, Graphics, Multimedia 16.4%	Specialized Discourse Media/Types 16.1%	Teaching and/or Training 12.5%	Reading and Writing Processes 10.8%	Communication Management 10.3%	Collaborative & Organizational Processes 9.7%	Professional Trends and Issues 9.4%	International and/or Cultural Issues 8.1%	Specialized Discourse Profession/Field 6.7%	10
Other	Communication Management 16.7%	Reading and Writing Processes 13.3%	Document Design, Graphics, Multimedia 12.6%	International and/or Cultural Issues 11.4%	Professional Trends and Issues 10.8%	Collaborative & Organizational Processes 10.2%	Teaching and/or Training 9.6%	Specialized Discourse Media/Types 9.5%	Specialized Discourse Profession/Field 5.9%	9

Participants were similarly varied in their ranking of "sources of data or methods for collecting data." Overall, "interviews of individuals" ranked highest with 20.8% of the total data collection methods/sources score. Second only to "interviews of individuals," "observation where participant behavior is mostly self-determined" was ranked second "most important" for data collection methods/sources, receiving 19.4% of the available score. The remaining four methods ranged from 16.9% for "group interviews" to 13.9% for "surveys," the item considered to be the "least important" data collection method or source, based on the overall percentage of data collection methods/sources scores obtained. "Interviews of individuals" and "observation where participant behavior is mostly self-determined" were ranked first and second based on percentage of total rank score achieved for most categories of demographic characteristic. However, there was more variation for sources of data or methods for collecting data than for research topic areas and methods for analyzing data. Respondents with Doctorate level degrees and respondents with degrees in electrical engineering reversed the items and listed observation first and individual interviews second, respondents who indicated English was their second language listed "group interviews" as "most important" with individual interviews and

observation listed second and third. Other engineering/computer science degree respondents listed "group interviews" behind individual interviews but ahead of observation while respondents with business degrees listed individual and group interviews as first and second but surveys as third ahead of observation. Respondents with English as their field or discipline had "sample documents" ranked as "most important" with 22.2% of the available rank score and "experiments where participant behavior is mostly determined by the researcher" at 20.0% ranked second. For these respondents, individual interviews was a distant third with a 16.7% score. "Interviews with individuals" was negatively correlated at the .05 significance level with English as a first language (-.224). Table 4 shows the six sources of data or methods for collecting data and the percentage of the total available rank scores earned by both overall and each individual demographic characteristic.

Table 4. Data Collection Methods/Sources Rankings

Category	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	6th Choice	Sample Size
Overall	Individual Interviews 20.8%	Observation 19.4%	Group Interviews 16.9%	Sample Documents 14.7%	Experiments 14.3%	Surveys 13.9%	101
Academician	Individual Interviews 20.4%	Observation 18.2%	Experiments 17.9%	Group Interviews 16.2%	Sample Documents 15.4%	Surveys 11.9%	19
Practitioner	Individual Interviews 21.3%	Observation 19.1%	Group Interviews 17.5%	Sample Documents 14.8%	Surveys 14.6%	Experiments 12.7%	78
Bachelor Degree	Individual Interviews 21.7%	Observation 19.4%	Group Interviews 19.4%	Sample Documents 13.7%	Surveys 13.2%	Experiments 12.6%	36
Masters Degree	Individual Interviews 22.2%	Observation 18.0%	Group Interviews 16.1%	Surveys 15.7%	Sample Documents 15.2%	Experiments 12.8%	36
Doctorate Degree	Observation 20.0%	Individual Interviews 18.2%	Experiments 17.2%	Sample Documents 16.2%	Group Interviews 15.1%	Surveys 13.3%	26
English 1st Language	Individual Interviews 22.0%	Observation 20.4%	Group Interviews 15.9%	Experiments 14.4%	Sample Documents 14.0%	Surveys 13.3%	75
English 2nd Language	Group Interviews 19.7%	Individual Interviews 17.2%	Sample Documents 16.9%	Observation 16.7%	Surveys 15.6%	Experiments 13.9%	26
Electrical Engineer	Observation 21.3%	Individual Interviews 19.6%	Group Interviews 17.0%	Experiments 14.7%	Sample Documents 14.1%	Surveys 13.3%	35
Other Engineer & Computer Science	Individual Interviews 22.1%	Group Interviews 19.7%	Observation 16.7%	Sample Documents 15.2%	Surveys 13.3%	Experiments 13.0%	22
Business	Individual Interviews 24.8%	Group Interviews 21.8%	Surveys 17.6%	Observation 15.8%	Sample Documents 10.9%	Experiments 9.1%	11
English	Sample Documents 22.2%	Experiments 20.0%	Individual Interviews 16.7%	Observation 16.1%	Surveys 13.9%	Group Interviews 11.1%	12
Natural Science & Math	Individual Interviews 20.0%	Observation 18.5%	Surveys 17.8%	Sample Documents 15.6%	Experiments 14.8%	Group Interviews 13.3%	9
Other	Individual Interviews 25.2%	Observation 24.4%	Group Interviews 17.0%	Surveys 11.9%	Sample Documents 11.9%	Experiments 9.6%	9

Overall, respondents consistently ranked quantitative/statistical analysis as the most important of the three methods for analyzing data. Quantitative/statistical analysis received 44% of the total possible methodology rank score and was listed as the number one method of analyzing data by every category of demographic characteristics except those people whose degrees were earned in the field of English. The respondents who had English as their field, discipline or area of degree had "qualitative descriptions of categories, patterns, etc. based on pre-existing theory" ranked as most important with 44.5% of the possible total points. Of the two qualitative methods, the one based on pre-existing theory was ranked as second "most important" overall, receiving 32% of the available score while the method not based on pre-existing theory was ranked as third "most important," receiving 24% of the available score. Data analysis methods showed no significant correlation, however, with any of the four demographic characteristics of degree, field of degree, job, and English language, at either the .01 or .05 level. Table 5 shows the three methods of analyzing data and the percentage of the total available rank scores earned by both overall and each individual demographic characteristic.

Table 5. Data Analysis Methods Rankings

Category	1st Choice	2nd Choice	3rd Choice	Sample Size
Overall	Quantitative/ Statistical Analysis 44.0%	Qualitative /Pre- existing Theory 32.0%	Qualitative/ NOT Pre-existing Theory 24.0%	100
Academician	Quantitative/ Statistical Analysis 40.8%	Qualitative /Pre- existing Theory 37.0%	Qualitative/ NOT Pre-existing Theory 22.2%	18
Practitioner	Quantitative/ Statistical Analysis 44.9%	Qualitative /Pre- existing Theory 32.0%	Qualitative/ NOT Pre-existing Theory 23.1%	78
Bachelor Degree	Quantitative/ Statistical Analysis 42.6%	Qualitative /Pre- existing Theory 33.3%	Qualitative/ NOT Pre-existing Theory 24.1%	36
Masters Degree	Quantitative/ Statistical Analysis 48.1%	Qualitative /Pre- existing Theory 30.6%	Qualitative/ NOT Pre-existing Theory 21.3%	36
Doctorate Degree	Quantitative/ Statistical Analysis 41.3%	Qualitative /Pre- existing Theory 36.0%	Qualitative/ NOT Pre-existing Theory 22.7%	25
English 1st Language	Quantitative/ Statistical Analysis 42.8%	Qualitative /Pre- existing Theory 33.3%	Qualitative/ NOT Pre-existing Theory 23.9%	74
English 2nd Language	Quantitative/ Statistical Analysis 47.4%	Qualitative /Pre- existing Theory 28.2%	Qualitative/ NOT Pre-existing Theory 24.4%	26
Electrical Engineer	Quantitative/ Statistical Analysis 44.7%	Qualitative /Pre- existing Theory 34.3%	Qualitative/ NOT Pre-existing Theory 21.0%	35
Other Engineer & Computer Science	Quantitative/ Statistical Analysis 50.0%	Qualitative /Pre- existing Theory 28.8%	Qualitative/ NOT Pre-existing Theory 21.2%	22
Business	Quantitative/ Statistical Analysis 43.4%	Qualitative /Pre- existing Theory 33.3%	Qualitative/ NOT Pre-existing Theory 23.3%	10
English	Qualitative /Pre- existing Theory 44.5%	Quantitative/ Statistical Analysis 33.3%	Qualitative/ NOT Pre-existing Theory 22.2%	12
Natural Science & Math	Quantitative/ Statistical Analysis 50.0%	Qualitative /Pre- existing Theory 26.7%	Qualitative/ NOT Pre-existing Theory 23.3%	10
Other	Quantitative/ Statistical Analysis 37.5%	Qualitative/ NOT Pre- existing Theory 33.3%	Qualitative /Pre- existing Theory 29.2%	8

In order to help determine whether respondents believe a particular set of research topic areas, data collection methods/sources, and data analysis methods is more important than another to the professional communication career field, correlations between responses to those categories and the additional information about the respondent's level of degree, field of degree, job, and English as their first language were calculated. Within each of the categories of research topic area, data collection method/source, and data analysis method, relationships to the individuals level of degree, field of degree, job, and first language were found at the .05 significance level. Except for the positive correlation between "professional trends and issues" and field of degree at .211 and the three negatively correlated items ("reading and writing processes" with level of degree at -.222, "collaborative and organizational processes" with field of degree at -.228, and "interviews with individuals" with English as a first language at -.224) there exists virtually no pattern to the manner in which these items were ranked by participants based on their degree, field, job, or language.

In addition to the forced rank items, the respondents were also asked to rate the usefulness of the nine research topic areas, six data collection

methods/sources, and three data analysis methods on a five point scale anchored by "no importance" and "great importance" at the ends. Level of degree, field of degree, job, and English as a first language responses to the nine related questions regarding the value of the research topic areas generated means between "some importance" (4) and "great importance" (5) for all items except "specialized discourse of a profession/field," "international and/or cultural issues," and "professional trends and issues." These three research topic areas had means between "not sure" (3) and "some importance (4)." "Specialized discourse media/types of communication" had the highest mean overall, 4.41, and "professional trends and issues" had the lowest overall mean at 3.52. Table 6 shows all nine Research Topic Areas and the mean scores earned by both overall and each individual demographic characteristic.

Table 6. Mean Scores for Research Topic Areas

Category	Collaborative & Organizational Processes	Specialized Discourse Media/Types	Document Design, Graphics, Multimedia	Specialized Discourse Profession/Field	Teaching and/or Training	Reading and Writing Processes	International and/or Cultural Issues	Communication Management	Professional Trends and Issues	Sample Size
Overall	4.12	4.42	4.06	3.85	4.04	4.09	3.86	4.05	3.5	104
Academician	4.32	4.47	4.05	3.84	4.26	4.26	3.95	3.58	3.37	19
Practitioner	4.06	4.38	4.05	3.83	3.96	4.06	3.84	4.16	3.58	81
Bachelor Degree	3.95	4.3	4.03	3.68	3.84	4.03	3.57	4.16	3.41	37
Masters Degree	4.13	4.45	4.05	3.84	4.16	4.18	3.95	4	3.66	38
Doctorate Degree	4.31	4.5	4.12	4	4.08	4.08	4.15	3.92	3.5	26
English 1st Language	4.06	4.31	4	3.82	3.94	4.14	3.77	4.06	3.45	77
English 2nd Language	4.26	4.74	4.22	3.93	4.33	3.93	4.11	4	3.63	27
Electrical Engineer	4.22	4.33	3.81	3.78	4.03	3.97	3.78	3.92	3.39	36
Other Engineer & Computer Science	4.3	4.52	4.26	4.04	4.22	4.43	3.78	4.22	3.39	23
Business	3.91	4.45	3.91	3.55	3.82	3.91	3.27	4.18	3.36	11
English	3.75	4.33	4.5	4.17	3.75	4.33	4.17	3.5	3.75	12
Natural Science & Math	4	4.8	4.3	3.5	4.1	3.3	4.1	4	3.5	10
Other	4	4	3.89	3.67	4	4.56	4.44	4.67	4.33	9

All six of the data collection methods/sources had means below 4 (between "not sure" and "some importance").

"Observation where participant behavior is mostly self-determined," "interviews with individuals," "group interviews," and "sample documents" all had means between 3.91 and 3.95. "Surveys" and "experiments where participant behavior is mostly determined by the researcher" had means of 3.74 and 3.54, respectively. Table 7 shows the data collection methods and sources and the mean scores earned by both overall and each individual demographic characteristic.

Table 7. Mean Scores for Data Collection Methods/Sources

Category	Observation	Experiments	Individual Interviews	Group Interviews	Surveys	Sample Documents	Sample Size
Overall	3.95	3.56	3.91	3.91	3.72	3.92	104
Academician	3.89	3.84	3.79	3.79	3.74	4.26	19
Practitioner	3.91	3.46	3.96	3.98	3.74	3.84	81
Bachelor Degree	4	3.22	3.92	4.08	3.7	3.59	37
Masters Degree	3.79	3.66	3.95	3.89	3.74	3.95	38
Doctorate Degree	4	3.81	3.88	3.77	3.85	4.35	26
English 1st Language	4	3.52	4	3.88	3.65	3.88	77
English 2nd Language	3.81	3.67	3.67	4	3.93	4.04	27
Electrical Engineer	4	3.44	3.72	3.83	3.69	3.75	36
Other Engineer & Computer Science	3.91	3.57	4.09	4.22	3.7	3.87	23
Business	3.55	3.36	4.18	4.27	4.09	3.82	11
English	3.83	4.25	3.92	3.75	3.92	4.5	12
Natural Science & Math	3.8	3.5	3.8	3.3	3.6	4	10
Other	4.33	3.11	4.11	4.11	3.67	4	9

Finally, the data analysis methods had means of 4.05 for "quantitative/statistical analysis," 3.86 for "qualitative descriptions of categories, patterns, etc. based on pre-existing theory," and 3.62 for "qualitative descriptions of categories, patterns, etc. not based on pre-existing theory." Table 8 shows the data analysis methods and the mean scores earned by both overall and each individual demographic characteristic.

Table 8. Mean Scores for Data Analysis Methods

Category	Qualitative /Pre-existing Theory	Qualitative/ NOT Pre-existing Theory	Quantitative/ Statistical Analysis	Sample Size
Overall	3.87	3.64	4.06	104
Academician	4.11	3.68	3.95	19
Practitioner	3.79	3.59	4.06	81
Bachelor Degree	3.76	3.59	3.95	37
Masters Degree	3.87	3.58	4.13	38
Doctorate Degree	3.96	3.69	4.08	26
English 1st Language	3.83	3.64	4.04	77
English 2nd Language	3.96	3.67	4.11	27
Electrical Engineer	3.86	3.61	3.92	36
Other Engineer & Computer Science	3.96	3.57	4.22	23
Business	3.82	3.64	4.18	11
English	4.08	3.67	3.92	12
Natural Science & Math	3.6	3.7	4.1	10
Other	3.56	3.56	4.11	9

Findings

Responses to whether practitioners and researchers agree on which research topic areas, data collection methods/sources, and data analysis methods are important to professional communication generally conform to theoretical expectation. Participants tended to agree on which factors were more important. Specifically, both practitioners and researchers (academicians) ranked "quantitative/statistical analysis" far ahead of the two qualitative methods as the most important data analysis method. Likewise, both researchers and practitioners ranked "interviews with individuals" and "observation where participant behavior is mostly self-determined" first and second in order of most importance for data collection methods/sources. The only area of significant disagreement between researchers and practitioners on which factors were more important was found in the research topic areas. In this area, practitioners ranked "reading and writing processes" as most important followed by "communication management," and, effectively, a three way tie between "collaborative and organizational processes," "specialized discourse media/types of communication," and "document design, graphics, multimedia." Researchers ranked "collaborative and organizational processes" as most important followed by "reading and

writing processes," "specialized discourse media/types of communication," and "teaching and/or training."

"Communication management" showed the biggest discrepancy being ranked as the second most important research topic area by practitioners but ranked a distant sixth most important by researchers.

Within the categories of level of degree, field of degree, and English as a first language, the respondents to the survey tended to somewhat disagree on which factors were most important to the professional communication process. For example, five of the six categories of field of degree ranked a different research topic area as being most important.

One item which was selected significantly more than its competing choices, indicating its relatively higher value, was quantitative/statistical analysis. Every single category of level of degree, field of degree, job, and English language had quantitative/statistical analysis as the most important method for analyzing data with one exception. Those participants with degrees in English had "qualitative descriptions of categories, patterns, etc. based on pre-existing theory" ranked as most important with quantitative/statistical analysis second most important. The respondents with English degrees also disagreed when it came to ranking data collection methods/sources. While four out

of the six field of degree categories ranked "interviews of individuals" as most important, those participants with English degrees had "sample documents" ranked as most important.

Responses to this survey reveal that, beyond the tendency of practitioners and researchers (job) to agree on the most important data collection methods/sources and data analysis methods, respondents in the other categories of level of degree, field of degree, job as it relates to research topic areas, and English as a first language tended to disagree on which items were most important to professional communication.

This research identifies support for quantitative/statistical analysis versus qualitative research as the most important data analysis method for both researchers and practitioners. Likewise, practitioners and researchers both agree that individual interviews and observation are the two most important data collection methods/sources. Finally, while showing some disagreement, this research provides insight regarding the specific research topic areas that are important to both practitioners and researchers.

V. Summary and Recommendations

Introduction

This chapter provides a brief summary of the findings of the research relative to the investigative questions presented in this paper. A discussion of the relationships observed is followed by a proposition of possibilities for further research in related areas of interest.

Summary

Participants responded to items addressing the question of whether researchers and practitioners perceive one best set of research topic area, data collection method/source, and data analysis method or were their perceptions of what defines a successful research project significantly different? Overall, researchers and practitioners agree on the most important rankings of data collection methods/sources and data analysis methods but somewhat tend to disagree on the most important rankings of specific research topic areas. When participants were grouped according to their demographic characteristics of level of degree, field of degree, and English as their first

language, the results show they somewhat disagreed on the rankings of research topic areas and data collection methods/sources. The exception to this trend was data analysis method where the respondents, except for people whose degrees were in English, were consistently in agreement on which method was considered most important.

Limitations

One of the study's potential limitations is the small number of responses received in comparison to the overall population. The 104 respondents represent a small percentage of the overall population of individual subscribers to *Transactions on Professional Communications*. Also, the research results cannot be generalized to technical and business communication practitioners who are not subscribers to *Transactions on Professional Communications*, since only subscribers were sampled.

Recommendations

The scope of this study was somewhat narrow in that it addressed only those investigative questions proposed in this paper. As a recommendation for continued investigation of this vital subject, the following suggestions are presented as possible topics for further consideration.

Since the respondents whose field of degree is English had such varied responses from the rest of the participants, it may be important to find out how much research is being generated by people in that discipline. Research in professional communications being done by academicians with English degrees may very well account for some of the gap between researchers and practitioners.

Another recommendation regarding further research is to use the survey with other professional communication groups representing the career field (e.g., Society for Technical Communication, Association for Business Communication, Association of Teachers of Technical Writing, etc.). This would broaden the sample base and allow for a more generalized conclusion regarding the technical and business communication career field.

Finally, a recommendation for additional research would be to use expanded scenarios to illustrate each research topic and method rather than short descriptions with one short example.

Appendix A: Survey

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INSTRUCTIONS: You can respond in two ways (but please make sure you answer EVERY question):

USE THE REPLY FUNCTION OF YOUR E-MAIL SOFTWARE:

- (1) Activate the feature which copies the message you're replying to.
- (2) Reply to this message and fill in your answers.
- (3) Send the message back to me at "kcampbel@afit.af.mil" by July 9, 1997.

SAVE THIS MESSAGE:

- (1) Save this message as a plain text (ascii or *.txt) file.
 - (2) Open the file in a plain text editor (e.g., Notepad) or word-processing program (Word or LaTeX).
 - (3) Insert your answers.
 - (4) Save the file as plain text. (This is CRUCIAL!)
 - (5) Send the file to "kcampbel@afit.af.mil" in an e-mail message (either in the body of the message or as an attachment) by July 9, 1997.
- =====

SECTION 1: Place an "X" inside the square brackets of the term that best describes how often you read the following components of an issue of the Transactions.

A. Editorials

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

B. Commentary

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

C. Research Articles

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

D. Book Reviews

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

E. Announcements

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

(Use the comment space at the end of this questionnaire to tell us about any features you would like to see added to the Transactions.)

SECTION 2: Place an "X" inside the square brackets of the term that best describes how important you think different areas of research are (or could be) for advancing the practice of communicating business and technical information.

A. Collaborative and organizational processes involved in communicating business/technical information (e.g., co-authorship, team projects)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

B. Specialized discourse media/types of communication: 1) Oral (e.g., negotiations, presentations), 2) Written (e.g., proposals, instructions), and 3) Electronic (e.g., help files, e-mail)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

C. Document design, graphics, multimedia (e.g., page layout, graphics, audio, screen design)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

D. Specialized discourse of a profession/field (e.g., business, engineering, science, law, environmental/health/risk)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

E. Teaching and/or training (e.g., curriculum, instructional methods, instructional materials)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

F. Reading and writing processes (e.g., decoding, chunking, planning, composing, revising)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

G. International and/or cultural issues (e.g., styles/preferences, translation)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

H. Communication Management (e.g., project management, quality)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

I. Professional trends and issues (e.g., history of the field, educational programs, salaries)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

Section 3. Rank the relative importance of all nine research topic areas from Section 2 by placing a number inside the square brackets, with "1" denoting MOST important and "9" denoting LEAST important.

- ☐ Collaborative and organizational processes
- ☐ Specialized discourse media/types of communication
- ☐ Document design, graphics, multimedia
- ☐ Specialized discourse of a profession/field
- ☐ Teaching and/or training
- ☐ Reading and writing processes
- ☐ International and/or cultural issues
- ☐ Communication Management
- ☐ Professional trends and issues

SECTION 4: Place an "X" inside the square brackets of the term that best describes how important you think different sources of data or methods of collecting data are (or could be) for research seeking to advance the practice of communicating business and technical information.

A. Observation where participant behavior is mostly self-determined (whether conducted in work settings or laboratories)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

B. Experiments where participant behavior is mostly determined by the researcher (whether conducted in work settings or laboratories)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

C. Interviews of Individuals (via telephone or face-to-face)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

D. Group Interviews (e.g., focus groups, nominal-group technique, delphi technique)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

E. Surveys (via mail or e-mail or web)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

F. Documents (e.g., policy manuals, computer documentation, memos, help files)

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

Section 5. Rank the importance of all six sources of data or methods for collecting data from Section 4 by placing a number inside the square brackets, with "1" denoting MOST important and "6" denoting LEAST important.

- ☐ Observation where participant behavior is mostly self-determined
- ☐ Experiments where participant behavior is mostly determined by the researcher
- ☐ Interviews of Individuals
- ☐ Group Interviews
- ☐ Surveys
- ☐ Sample Documents

Section 6. Place an "X" inside the square brackets of the term that best describes how important you think different methods of analyzing data are (or could be) for research seeking to advance the practice of communicating business and technical information.

A. Qualitative descriptions of categories, patterns, etc. based on pre-existing theory (e.g., in a usability test of two versions of on-line help, user errors are categorized into one of four types based on theory of cognitive load).

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

B. Qualitative descriptions of categories, patterns, etc. NOT based on pre-existing theory. (e.g., in a usability test of two versions of on-line help, user errors are categorized into one of four types based on the researcher's opinion or intuition).

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

C. Quantitative/statistical analysis (e.g., in a usability test of two versions of on-line help, the effect of the user's age and gender on the type of user errors is analyzed).

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

Section 7. Rank the importance of all three methods for analyzing data from Section 6 by placing a number inside the square brackets, with "1" denoting MOST important and "3" denoting LEAST important.

- ☐ Qualitative descriptions of categories, patterns, etc. based on pre-existing theory
- ☐ Qualitative descriptions of categories, patterns, etc. NOT based on pre-existing theory
- ☐ Quantitative/statistical analysis

Section 8. Place an "X" in front of the appropriate responses below so that we know a little more about you.

A. Your age

- ☐ 25 or less
- ☐ 26-40
- ☐ 41-55
- ☐ 56-65
- ☐ 66 or more

B. Your gender

- ☐ female
- ☐ male

C. Degree(s) earned (check all that apply and fill in the blank with field,

discipline or area in which degree was earned at each level)

- ☐ Bachelor _____
- ☐ Master _____
- ☐ Doctorate _____

D. What is your current job title? (If retired, list your title at retirement.)

E. Who is your employer? (If retired, list your LAST employer.)

F. Type of employer

- ☐ large industry
- ☐ government
- ☐ small company
- ☐ university/other non-profit
- ☐ independent contractor

G. How important is communication to your professional success?

- ☐ No importance
- ☐ Little importance
- ☐ Not sure
- ☐ Some importance
- ☐ Great importance

H. Is English your first language?

- ☐ yes
- ☐ no

I. What percentage of your professional time is spent communicating in English?

- ☐ less than 10%
- ☐ 10% to 25%
- ☐ 25% to 50%
- ☐ 50% to 75%
- ☐ 75% to 90%
- ☐ more than 90%

J. Geographic area of residence

- ☐ U.S.
- ☐ Canada
- ☐ Mexico
- ☐ Central or South America
- ☐ Western Europe
- ☐ Eastern Europe
- ☐ Australia
- ☐ Africa
- ☐ Middle-East
- ☐ Asia

K. Do you belong to other IEEE societies?

- ☐ yes (please list below)
 - ☐ no
-

L. Do you belong to other technical/business communication organizations?

- ☐ yes (please list below)
 - ☐ no
-

COMMENTS: (Please insert any comments, suggestions or other feedback below.)

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PLEASE RETURN THIS MESSAGE TO kcampbel@afit.af.mil

*****THANKS FOR YOUR HELP*****

Bibliography

- Alreck, P. L. and R. B. Settle. The Survey Research Handbook. Chicago: Richard D. Irwin, Inc., 1995.
- Beard, J. D. and D. L. Williams. "A Survey of Practitioners Attitudes Toward Research in Technical Communications," Technical Communication, 39, no. 4, pp. 571-581, 1992.
- Campbell, K. S. "Prioritizing Research Topics in Technical Communication," (In Press) Proceedings of the International Professional Communication Conference, Snowbird UT, Oct 22-24, 1997.
- Cooper, D. R. and C. W. Emory. Business Research Methods, 5th edition. Chicago: Irwin, 1995.
- Dillman, D. R. Mail and Telephone Surveys: The Total Design Method. New York: McGraw-Hill, 1954.
- Philbin, A. I. (Ed.) "1995 ATTW Bibliography," Technical Communication Quarterly, 5, no. 4, pp.439-474, 1996.
- Pinelli, T. E. and R. O. Barclay. "Research in Technical Communication: Perspectives and Thoughts on the Process," Technical Communication, 39, no. 4, pp. 526-532, 1992.
- Plumb, C. and J. H. Spyridakis. "Survey Research in Technical Communication: Designing and Administering Questionnaires," Technical Communication, 39, no. 4, pp. 625-638, 1992.
- Rainey, K. T. and R. S. Kelly, "Doctoral Research in Technical Communication, 1965-1990," Technical Communication, 39, no. 4, pp. 552-570, 1992.
- Smith, F.R. "The Continuing Importance of Research in Technical Communication," Technical Communication, 39, no. 4, pp. 521-523, 1992.
- Watt, J. H. and S. A. van den Berg. Research Methods for Communication Science. Boston: Allyn and Bacon, 1995.

Zimmerman, D. E. and M. L. Muraski. The Elements of
Information Gathering: A Guide for Technical
Communicators, Scientists, and Engineers. Phoenix AZ:
Oryx, 1995.

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Mr. Buschagen has served in federal government contracting at Wright-Patterson Air Force Base since August 1971. He began his acquisition career in subsystem contracting in the Directorate of Reconnaissance and Electronic Warfare. He was a member of the first group of trainees selected for the Copper Cap training program in 1972 and received a contracting officer's warrant in 1976. He has served as contracting officer on numerous programs including the F-16 fighter and B-2 bomber. Mr. Buschagen was admitted to the Graduate School of Logistics and Acquisition Management, Air Force Institute of Technology, in May 1996. Upon completion of the AFIT graduate program, he will be assigned to a staff position at Aeronautical Systems Center.

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REPORT DOCUMENTATION PAGE			Form Approved OMB No. 074-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503				
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE September 1997	3. REPORT TYPE AND DATES COVERED Master's Thesis		
4. TITLE AND SUBTITLE AN INVESTIGATION OF PRIORITIZING RESEARCH TOPICS IN PROFESSIONAL COMMUNICATION		5. FUNDING NUMBERS		
6. AUTHOR(S) Richard G. Buschagen				
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology 2750 P Street WPAFB OH 45433-7765		8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GCM/LAL/97S-1		
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING / MONITORING AGENCY REPORT NUMBER		
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited.		12b. DISTRIBUTION CODE		
13. ABSTRACT (<i>Maximum 200 Words</i>) This research explored which areas and methods of research need to be identified and developed to most effectively communicate business and technical information. The research was sparked by the current literature which indicates that a gap exists between academicians, who do most of the research, and practitioners, who utilize the research results. This effort was intended to address possible causes of this problem by establishing the importance of nine research topic areas, six data collection methods/sources, and three data analysis methods for both academicians and researchers and other demographic characteristics. The research concludes that the participants generally agreed on which factors were most important. Findings indicated that researchers and practitioners tended to agree on data analysis methods and data collection methods/sources but did show some disagreement on research topic areas. The research also uncovered evidence that demographic characteristics such as level of degree, area of degree, job, and English as a first language may influence which factors are considered to be most important to the professional communication process.				
14. SUBJECT TERMS Professional Communication, Research Topic Areas, Data Collection Methods/Sources, Data Analysis Methods			15. NUMBER OF PAGES 66	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL	

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2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it?
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3. **Please estimate** what this research would have cost in terms of manpower and dollars if it had been accomplished under contract or if it had been done in-house.

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a. Highly b. Significant c. Slightly d. Of No
Significant Significant Significance

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