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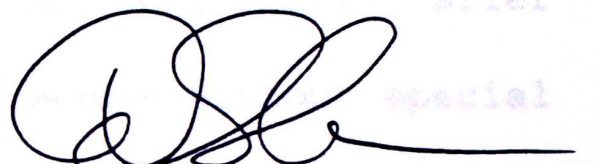
GENDER DEMOGRAPHICS IN THE BUSINESS MAJOR:  
A NATIONAL SURVEY

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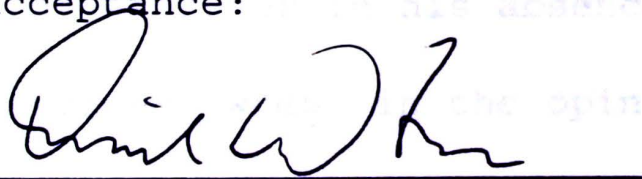
SUSAN PAINE

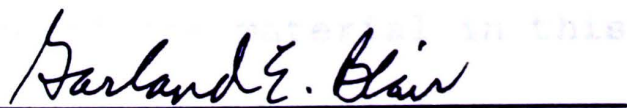
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I am submitting herewith a thesis written by Susan Paine entitled "Gender Demographics in the Business Major: A National Survey." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements of the degree of Master of the Arts, with a major in Psychology.


  
Major Professor

We have read this thesis and recommend its acceptance:

  
\_\_\_\_\_

  
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5/18/98

GENDER DEMOGRAPHICS IN THE BUSINESS MAJOR:

A NATIONAL SURVEY

A Thesis

Presented for the

Master of Arts

Degree

Austin Peay State University

Susan Paine

May 1998

## ACKNOWLEDGMENTS

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## ABSTRACT

Gender differences in the demographics of business departments nationwide were investigated. Participants were the chairs and program directors from institutions responding to a survey for the Project for Area Concentration Achievement Testing (PACAT). These participants responded to a survey asking them to estimate the percentage of male and female students in their business major at their institutions, to rate their own teaching methods, and to choose which characteristics were typical of their male and female students. Responses were then broken down into those schools with a larger percentage of men, those with a larger percentage of women, and those with equal numbers of each. The business concentrations included were accounting, finance, general business, business administration, and marketing/management.

Results indicated no differences among business majors in gender balance. Nor were any differences found in teaching methods for either predominantly male or

predominantly female schools. Some small differences in attribution of three characteristics to women were found in accounting and predominantly female marketing/management departments. But overall findings indicate a general gender equity in attitude, teaching methods, and population within business majors.

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Gender demographics in the business major:

A national survey

## Introduction

Since the Civil Rights Act of 1964, women have held a legal right to equity in employment and education. Today, more and more women are choosing higher education as a path to better career choices. These choices are reflected in a higher percentage of women students in several major academic disciplines at the baccalaureate level nationwide (Fleming & Golden, 1997a).

A growing equality at one educational or career level does not ensure equality at the next level. Even areas of study as inherently objective and merit-based as the sciences and engineering are not immune to this inequity. As recently as 1994, the National Science Foundation determined that women held more jobs at lower salary and status, and were underemployed, or worse, unemployed, at significantly higher rates than their male counterparts (in Jones, 1997).

This lack of success does not appear to be based on any lack of preparation on the part of the women students. Vocational research indicates instead that women, from high school onward, score significantly higher than men on both preparation for and knowledge of their intended career. Luzzo (1995) termed this phenomenon, "career maturity".

Such early evidenced career maturity suggests that women will have an edge on men by the time they enter the job force. On one level, they seem to have this edge; the number of women on corporate boards in America has increased (Novack & Novack, 1996). However, at the next level, that of CEO, the number of women has actually declined (Novack & Novack, 1996). This finding parallels that of the National Science Foundation findings (in Jones, 1997).

Existing stereotypes suggest that women do not have the same executive drive as their male counterparts. Yet studies show that women today score just as highly as men on personal characteristics such as assertiveness and the "desire to compete" (Thornton, Hollenshead, & Larsh, 1997). Women may well have been exhibiting these traits far

earlier, except that many researchers only just began to include women in their data in the late 1980s (Parr & Neimeyer, 1994).

### Equity in Education

If the battles fought for affirmative action have failed to redress inequity in the job market, where could another solution begin? Education is often the first stage in career development, and a study of differences already present at this stage could indicate possible origins of the inequity. Research conducted by Fleming and Golden's (1997b) has indicated that more women than men are graduating in many disciplines (art, English, history, political science, psychology, and social work). These researchers found a larger percentage of male graduates only in agriculture and criminal justice.

Women may still be disadvantaged in the educational phase of their careers by a variety of factors, some more easily changed than others. Even in areas dominated by women, identification and study of these factors as barriers to career development are of vital concern. Many

studies have suffered from "poorly-defined constructs and an overemphasis on personal factors" when observing women's career development and choices from college onward (Luzzo, 1995). One study even characterized "independence and decisiveness" as purely masculine characteristics (Burnett, Anderson, & Heppner, 1995). Although most researchers are on their guard, such residual stereotyping continues (Nelson, Acker, & Manis, 1996).

This stereotyping seems to create the most damage in the very arena in which it should be least likely to exist. The damage done in the academic environment limits women's beliefs in and expectations of their own "self-efficacy" (Ancis & Phillips, 1996). Data suggest that the women who exhibit the most masculine, or autocratic leadership style, are not only considered better problem solvers, but altogether more successful (Wheatley, Amin, & Maddox, 1991). With that message, women could concentrate on developing those autocratic characteristics for success during their college years. Yet the job market requirements may emphasize flexibility and adaptability,

and their career goals (Luzzo & Hutcherson, 1994).

rather than the autocratic style female graduates have learned to use for success (Graham & Cockriel, 1989).

Such conflicting messages often present a barrier for women, whatever their choice of college major or career. The greater percentage of women in many fields and in college student populations does not ensure equality in all fields. Although 72% of the data sample in one study was women, men still predominated in agriculture and criminal justice (Fleming & Golden, 1997a). Another study, including only psychology students, showed a ratio of three to one of women to men, and yet women still performed more poorly on the ACAT, despite higher grade point averages overall and the presence of career maturity (Causey, Fleming, & Golden, 1996).

### Loss of Prestige

Despite their increasing numbers in the fields of education and the work force, women are often viewed and treated as a minority. Unfortunately, one way that minorities are encouraged to compensate entails the compromise of their career goals (Luzzo & Hutcheson, 1994).

A member of a minority group may thus settle for a career lower in prestige or social status than one originally intended. The opposite may occur when a formerly high prestige career becomes one no longer.

Among a group of graduates who reported that they had been encouraged to seek high prestige jobs, only 5% chose jobs aligned with the social sciences as one of those jobs (Leung, Ivey, and Suzuki, 1994). The social sciences, for instance, include some of the very fields most often chosen by women as a career choice (Fleming & Golden, 1997b). This decrease in prestige for an increasingly feminized field of study could easily damage that field's status as expressed in teaching orientations or within the job market for an entire cohort (Keyes & Hogberg, 1990).

Self-help and Change 1993). Such cooperation would make

With such factors working against equality for women from choice of career in high school onward, it seems that a massive effort would be required to even begin to rectify the problem. However, this may not always be the case. As small a thing as a student's feeling "socialized" into her

major in college carries positive effects for her well into her professional career (Fouad & Carter, 1992). Even these small changes, sometimes as minor as using tabular data, preferred by women, in addition to the graphs preferred by men, may be met with opposition (Togo & Hood, 1992).

In spite of such resistance, women students overall meet these difficulties with a seemingly positive attitude. From the fields of education to the work force, women continue to exhibit "cooperative self interest" (Kravitz & Platania, 1993). Despite discrimination, women since 1960 have shown far more positive attitudes than men towards authority figures in the workplace (Thornton et al., 1997).

Cooperation also seems a key element of women's business mind set. Women are even likelier to support affirmative action for men than are men who would benefit (Kravitz & Platania, 1993). Such cooperation would make better sense if women were still a minority without a power base at all in the business world. But women in corporate America currently hold 41% of managerial positions (as opposed to less than 10% in Japan), and 41% does not

student outcomes assessment now is included as a

usually suggest a minority (Morinaga, Frieze, & Ferlinoj, 1993).

### Role of Undergraduate Education

It has become essential to determine the degree to which undergraduate education serves to reduce or widen gender gaps in specific areas of study. Student outcomes assessment measures are usually taken by baccalaureate candidates before graduation. These provide a valid source for study of gender demographics at that first level of career development (Graham & Cockriel, 1989).

The growing movement to require outcomes assessment measures widens the scope of the demographic pool. As the number of assessment mandates increases nationwide, the student sample available grows as well, and offers a rich and varied source of demographic information concerning college students in undergraduate assessment programs.

### Sources of Information

Originating both regionally and nationally in the late 1970's, student outcomes assessment now is included as a

criterion for accreditation by all of the regional accrediting organizations and many societies which accredit professional programs (Ostar, 1986; Rudolph & Nixon, 1986). Such requirements created the need for evaluations of institutional priorities and curricula, which in turn have led to the development of specialized measurement models and instruments (Golden & Squire, 1991; Roth, Golden & Chaplin, 1993).

The Project for Area Concentration Achievement Testing (PACAT) is a university based national outcomes assessment project. PACAT surveys academic curricula by content area, solicits examination items from participating departments, and constructs, distributes, and scores the Area Concentration Achievement Test (ACAT). ACAT specifications are based upon national surveys of content area requirements for the major. The most recent survey completed was that of the national business major. Surveys were sent to 3,474 baccalaureate business programs nationwide, and the results indicated five major concentrations within the business major: accounting,

finance, general business, business administration, and marketing/management.

Any study of gender or ethnic differences must, for reasons of ethics and effectiveness, ensure that the measurement techniques and the resulting data are valid, and that there are no negative consequences to the subjects from being included in the study (Thornton et al., 1997). The survey designed for this study examined such questions as gender breakdown in the student body of institutions included, teaching methods used for both men and women each students, and attitudes toward gender characteristics. Summary data were collected from the department chairs of business at institutions which had already expressed interest in a business outcomes assessment exam. These responses were subjected to statistical analysis, which in turn produced "quality assurance data" which could be interpreted within an empirical framework as suggested by Lambert, Ogles, and Masters (1992).

## Hypotheses

Hypothesis 1: There will be a higher reported percentage of men in the business majors in colleges as compared to that of women students in the same majors.

Hypothesis 2: There will be significant differences in the methods of teaching employed by departments with a higher percentage of women students when compared to those with a higher percentage of male students.

Hypothesis 3: Gender balance and various attributed personality characteristics will not be independent of each other.

## METHOD

Participants

The chairs and directors of 698 business programs were sent surveys for voluntary inclusion in this study. These schools had already expressed interest in a business outcomes assessment instrument by returning an earlier national survey. This earlier survey was designed to assess the content areas required for five concentrations within the business major; accounting, finance, general business, business administration, and management/marketing.

All were four year schools with a major in one or more of the applicable areas of business. The 72 surveys returned were further divided for purposes of this study by percentage of women students, percentage of men students, and area of concentration within the business major (see Appendix C). Information was thus provided via third person aggregate data, insuring anonymity.

## Instrument

A one-page list of broad demographic questions addressing the hypotheses was constructed for this survey (see Appendix B). Participants were asked to estimate the percentages of men and women currently taking the particular concentration of the business major at their institution. The survey then asked department chairs and program directors to identify which of the six personal characteristics identified by Miner (as cited in Thornton et al., 1997) were "typical" of their male and female students. A third part of the survey asked respondents to rate their department's use of various teaching methods.

Miner delineated six "role motivation" components as indicative of future career success: assertiveness, desire to compete, exercising power, positive attitudes towards authority, standing out from the group, and willingness to carry out routine work (as cited in Thornton et al., 1997). Studies using his instrument, the Miner Sentence Completion Scale (MSCS), have shown consistent measurement of gender attitudes (Thornton et al., 1997). that purpose on the PACAT

However, the MSCS is a projective test, for administration to individual participants. In this wise, it would have been inappropriate for use with the participants in this study. Instead, Miner's characteristics were listed on the survey as a checklist. Reported use of different teaching methods was also examined in this study, and this information would not have been available from the MSCS.

A national survey of effectiveness in teaching aids was updated with currently available methods (such as computer tutorials and distance learning/videoconferencing) and used as a base for the list of teaching methods (Anderson, Banks, Morrison, & Sapre, 1985). Participants were asked to rate each method using a Likert scale from one, "not used at all," to seven, "very frequently used," to identify the methods used at their institution.

Each survey was coded with an institution and a concentration code of five numbers each, to identify concentration area and to ensure validity of responses of returned via a website set up for that purpose on the PACAT

of actual student population numbers were also

web server. The public nature of the PACAT site necessitated some means to authenticate survey returns.

### Procedure

Surveys for the study were distributed to the institutions which had already returned PACAT's survey for major business concentrations. The study survey was included in the report of PACAT's results. A letter was included in each, explaining the purpose and intent of the study. This letter also included the five digit code specific to that institution, as well as another five digit code that indicated which area or areas were used in the department. The second code was included to distinguish between responses from different areas within the same department, a necessary distinction in some of the large schools offering wider business programs. The codes corresponded to a current PACAT database of schools which offer a business major.

Participants were asked to estimate the percentage of men and women students in the major at their schools. Responses of actual student population numbers were also

allowed, and those percentages calculated during data entry. A list of teaching methods was then presented, and the participants asked to rate their school's use of same on a Likert scale. A blank space for responses of "other" was provided as well.

On the checklists for male and female student characteristics, participants were invited to check those which applied to students at their institutions, and were free to leave any or all blank.

Although a self-addressed envelope was included, the return address for PACAT was given at the end of each survey. A place was also provided for the participants to request survey results. The PACAT database for institution codes was made available to process those requests.

A paired samples t-test, but the

were not significantly different,  $t(71) = .233$ ,

the data were then divided into the five

and another paired samples t-test was

no significant differences in gender division

were obtained for any of the business areas

## RESULTS

Of the 698 surveys sent out, 72 were returned, 65 by mail and 7 by web site. The information in these surveys was examined using the SYSTAT statistical program.

Responses arrived from chairs within all of the business concentrations chosen: 36% from accounting, 22% from business administration, 18% from general business, 14% from marketing/management, and 10% from finance. Overall, program chairs and directors estimated that their programs enrolled a mean of 50.3% women students and 49.7% men, with a standard deviation of 11.7 in both cases.

Together, the percentages of men and women students were subjected to a paired samples  $t$ -test, but the percentages were not significantly different,  $t(71) = .233$ ,  $p = .82$ . These data were then divided into the five concentrations and another paired samples  $t$ -test was applied, but no significant differences in gender division of the sample were obtained for any of the business areas (see Appendix C). The collapsed categories were subjected

In order to examine possible differences in departments with a higher percentage of men students versus those with a higher percentage of women, the departments were divided into either predominantly male or female departments and the remaining departments were not used for analyses concerning gender balance, reducing the sample size to 61 for examining the possible impact of departmental gender balance.

Frequency of use of teaching methods were then examined. Among the questions asked were whether departments with a higher percentage of one gender were likelier to use particular teaching methods. Since use of the teaching methods had been reported using a Likert scale, departments were compared using  $t$ -tests. Bonferroni adjusted probability was used because of multiple  $t$ -tests being applied to the same set of data. No significant differences were found (see Appendix D).

The responses for those teaching methods that were nearest to significance, computer tutorials, internships, and lecture, were then collapsed into three categories; 1-2, 3-5, and 6-7. The collapsed categories were subjected

to a second  $t$ -test, but even so, no significant results were found.

In the survey, departments chairs were also asked to indicate which personality characteristics they would assign to men and women students. Each of these responses was then examined in a  $2 \times 2$  Chi-square to determine if any were seen as specifically male or female. No significant effects were found in the sample overall.

When the data were reexamined by concentration, some significant effects were observed using an alpha of .10. Although less precise, the larger alpha was used since this study was essentially descriptive in nature, and the sacrifice of precision for sensitivity was indicated in order to get a better idea of the nature of the population being studied. When sample sizes were too small, the Fisher exact test and the Yates corrected Chi-square were used as appropriate.

Even so, only two concentrations held statistically different departmental perceptions of men and women students. If accounting departments had a predominantly male student body, women were reported as more assertive,

$X^2(1, N = 21) = 4.2, p = .06$ . In accounting departments with a predominantly female student body, women were more often seen as having a positive attitude towards authority,  $X^2(1, N = 21) = 3.86, p = .05$ . In marketing/management departments with a predominantly female student body, women were more likely to be reported as having positive attitudes towards authority,  $X^2(1, N = 7) = 3.57, p = .05$ , and likelier to be willing to perform routine tasks,  $X^2(1, N = 7) = 2.91, p = .08$ . No significant effects were found in finance, general business, or business administration.

## CHAPTER 4

### DISCUSSION

Unlike the disciplines studied by Fleming and Golden (1997a), no differences were obtained for the percentages of men and women taking the business major at the participating institutions. Nor were any major differences found in the teaching methods used within those majors. Although a few differences were found in attributed characteristics for men and women students, it was necessary to reduce the alpha level to .10 to find even those differences. For predominantly male accounting departments, women were seen as more assertive. For predominantly female accounting and marketing/management departments, women were more often seen as holding a positive attitude towards authority, and in female marketing/management departments alone, women were seen as more often willing to perform routine tasks.

These findings did not support any of the hypotheses in this study. Reported gender balance of students in the business major were nearly equal for each concentration.

Whether a department had more male or female students had little or no relationship with teaching methods used, or with attitudes towards male and female students. The few differences were in the attribution of characteristics to women students.

On a positive note, these findings echo a trend observed by Miner over ten years' of study, that students viewed themselves less as bound to stereotypical divisions in gender (in Thornton et al., 1997). That such equity seems to extend to the reported attitudes and methods of by faculty as well suggests a positive trend towards a practical as well as an ideological atmosphere of equal opportunity in education.

However, this equity has not yet been wholly reflected at the career level. It is at the highest levels that the difference is the most apparent, as may be seen in that the number of female CEO's has not risen to become more equal, but instead declined (Novack & Novack, 1996). One intent behind this study was in fact to pinpoint a source or sources for career inequities within higher education.

Their returning the survey in the first

Yet the only differences found were a few marginal imbalances in attribution of some characteristics to women students. Surely a minor tendency for male departments to see women students as more "assertive," or for only the female departments to see women as more often "willing to perform routine work" or having a "positive attitude towards authority" could not affect future career performance or achievement of those self-same women students.

Study after study, conducted at the national level by organizations such as the American Association of University Women, have shown that such mild attitudinal attributions can have such an effect, all the more damaging because they can be "less visible and more insidious" (Jones, 1997). This study involved only the self-reported views of program chairs and directors. A fuller picture might have been obtained by accessing the students for their view of their own characteristics, or for that matter, which teaching methods they saw the faculty using.

Even overall, 72 institutions represents a relatively small sample. Their returning the survey in the first

place might indicate preexisting interest in or openness to gender issues, and rendering the sample responses skewed. Future research with the growing PACAT database of business schools would assure a larger sample size, and a possible future outcomes assessment test for business majors would allow access to a much wider student demographic pool.

However, the results of this study have suggested such balance in student bodies, faculty attitudes, and teaching methods in the business majors, that the business major might prove a good avenue to study how to effectively create more gender equity. Though great strides have been made in this area, much work remains to be done. An equal education is only the first step towards true equal opportunity.

## REFERENCES

- Anderson, W.P., & Reppner, P.P. (1996). The use of self-reports in counseling: A consideration of validity and reliability. Journal of Counseling and Development, 74, 323-326.
- Golden, A., & Fleming, S. (1996, June). Gender differences in psychology content area mastery scores of graduating seniors. Poster presented at the American Psychological Society, San Francisco, CA.
- Golden, A., & Golden, A. (1997a, June). Gender differences in research methods across disciplines. Poster presented at the American Psychological Society, San Francisco, CA.

## REFERENCES

- Ancis, J. R., & Philips, S.D. (1996). Academic gender bias and women's behavioral agency self-efficacy. Journal of Counseling and Development, 75, 131-137.
- Anderson, R., Banks, J., Morrison, J.L., & Sapre, P. (Eds.). (1985). National Survey Measures Value of Business-Sponsored Teaching Aids. Journal of Business Education, 60, 239.
- Burnett, J.W., Anderson, W.P., & Heppner, P.P. (1995). Gender roles and self-esteem: A consideration of environmental factors. Journal of Counseling and Development, 73, 323-326.
- Causey, A., Golden, A., & Fleming, S. (1996, June). Gender differences in psychology content area mastery nationwide by graduating seniors. Poster presented at the American Psychological Society, San Francisco, CA.
- Fleming, S., & Golden, A. (1997a, June). Gender differences in research methods across disciplines. Poster presented at the American Psychological Society, Washington, DC.

Fleming, S., & Golden, A. (1997b). Higher education: Some gaps for women close while others widen. In, Gender and Race on the Campus and in the School: Beyond Affirmative Action (pp. 191-201). Washington: American Association of University Women Foundation.

Fleming, S., Causey, A., & Golden, A. (1996, June). Female "flight" to postgraduate education. Poster presented at the American Psychological Society, San Francisco, CA.

Fouad, N.A., & Carter, R.T. (1992). Gender and racial issues for new counseling psychologists in academia. The Counseling Psychologist, 20, 123-140.

Golden, A., & Squire, D. (1991). The third alternative. Assessment Update, 3, 10-11.

Graham, S.W., & Cockriel, I. (1989). College outcome assessment factors: An empirical approach. College Student Journal, 23, 280-288.

Jones, L.S. (1997). Taking the sciences beyond affirmative action: Cultural impediments to gender and racial/ethnic inclusion. In, Gender and Race on the Campus and in the School: Beyond Affirmative Action (pp. 35-50).

Washington: American Association of University Women Educational Foundation.

Keyes, B.S., & Hogberg, D.K. (1990). Undergraduate psychology alumni: Gender and cohort differences in course usefulness, postbaccalaureate education, and career paths. Teaching of Psychology, 17, 101-105.

Kravitz, D.A., & Platania, J. (1993). Attitudes and beliefs about affirmative action: Effects of target and of respondent sex and ethnicity. Journal of Applied Psychology, 78, 928-938.

Lambert, M.J., Ogles, B.M., & Masters, K.S. (1992). Choosing outcome assessment devices: An organizational and conceptual scheme. Journal of Counseling and Development, 70, 527-532.

Leung, S. A., Ivey, D., & Suzuki, L. (1994). Factors affecting the career aspirations of Asian Americans. Journal of Counseling and Development, 72, 404-410.

Luzzo, D.A. (1995). Gender differences in college students' career maturity and perceived barriers in career development. Journal of Counseling and Development, 73, 319-322.

Luzzo, D.A., & Hutcheson, K.G. (1996). Causal attributions and sex differences associated with perceptions of occupational barriers. Journal of Counseling and Development, 75, 124-130.

Morinaga, Y., Frieze, I.H., & Ferlitoj, A. (1993). Career plans and gender-role attitudes of college students in the United States, Japan, and Slovenia. Sex Roles, 29, 317-335.

Nelson, T.E., Acker, M., & Manis, M. (1996). Irrepressible stereotypes. Journal of Experimental Social Psychology, 32, 13-38.

Novack, L.L., & Novack, D.R. (1996). Being female in the eighties and nineties: Conflicts between new opportunities and traditional expectations among white, middle class, heterosexual college women. Sex Roles, 35, 57-77.

Ostar, A. (1986). Foreword. In K. McGuinness (Ed.), Legislative action & assessment: Reason and reality. Washington, DC: American Association of State Colleges and Universities. (ERIC Document Reproduction Service No. ED 293 387).

Parr, J., & Neimeyer, G.J. (1994). Effects of gender, construct type, occupational information, and career relevance on vocational differentiation. Journal of Counseling Psychology, 41, 27-33.

Roth, R. (Moderator), Golden, A., & Chaplin, W. (1993, February). A Systematic Approach to Achievement Testing in the Major. Presented at the Alabama Association for Institutional Research Conference on Outcomes Assessment in Higher Education: The Role of Assessment in Total Quality Management. Tuscaloosa, AL.

Rudolph, L., & Nixon, J. (1986). Evaluation for excellence: The Tennessee Plan. In K. McGuinness (Ed.), Legislative action & assessment: Reason and reality. Washington, DC: American Association of State Colleges and Universities. (ERIC Document Reproduction Service No. ED 293 387).

Thornton, G.C., Hollenshead, J.D., & Larsh, S.L. (1997). Comparison of two measures of motivation to manage: Ethnic and gender differences. Educational and Psychological Measurement, 57, 241-253.

Togo, D.F., & Hood, J.N. (1992). Quantitative information presentation and gender: An interaction effect. The Journal of General Psychology, 119, 161-167.

Wheatley, W.J., Amin, R.W., & Maddox, E.N. (1991). The effects of gender and leadership styles on problem-solving perceptions: Implications for management training and development. Organization Development Journal, 51-60.

#### APPENDIXES

I am writing to you in the suggestion of a  
study. I am also conducting a study of  
the business major, if you would be  
able to provide information as well. If so, please  
complete the survey and return it in the enclosed  
mail. Thanking this research as my Master's  
sponsorship of PACAT.

Be kept **APPENDIXES** confidential. You may  
find the following web site: [www.business.survey](http://www.business.survey). Please include the  
code in your response, so that we can verify  
[Distribution Code-Concentration Code]. If you  
would like the results after the study is  
complete, please indicate so. Thank you for your time.

Respectfully,  
[Signature]  
[Name]  
[Address]  
[City, State, Zip]

## APPENDIX A

[Chair or Director  
Program  
Institution  
City, State Zip]

Dear Chair or Director:

You have responded with interest to the suggestion of a business exam. PACAT is also conducting a study of demographics within business major, if you would be interested in this information as well. If so, please complete the following survey and return it in the enclosed envelope. I am conducting this research as my Master's thesis, under the sponsorship of PACAT.

Information will be kept completely confidential. You may prefer to respond at the following web site: <http://198.146.60.86/business.survey>. Please include the following number in your response, so that we can verify the results: [Institution Code-Concentration Code]. If you would like a copy of the results after the study is completed, please indicate so. Thank you for your time.

Sincerely,

Susan Paine

- ☐ positive attitudes towards authority  
☐ standing out from the group  
☐ willingness to carry out routine work

the results of this survey, thanks.

Return to: PACAT  
Austin Peay State University  
Box 4568  
Clarkeville, TN 37044

## APPENDIX B

## PACAT Sponsored Business Demographics Survey

please estimate the percentage of men and women currently taking this concentration at your institution:

Men: \_\_\_\_\_

On a scale of 1 ("not used at all") to 7 ("very frequently used"), please rate the following teaching methods by frequency of use at your institution (Anderson et al., 1985).

\_\_\_\_\_ Case Studies  
 \_\_\_\_\_ Computer-based simulations  
 \_\_\_\_\_ Computer tutorials  
 \_\_\_\_\_ Distance learning/  
 videoconferencing  
 \_\_\_\_\_ Films/Video tapes  
 \_\_\_\_\_ Group discussion

\_\_\_\_\_ Group projects  
 \_\_\_\_\_ Group simulations  
 \_\_\_\_\_ Individual projects  
 \_\_\_\_\_ Internships  
 \_\_\_\_\_ Lecture  
 \_\_\_\_\_ Other (describe)  
 \_\_\_\_\_

Please indicate by checking below, which characteristics are typical of **female** students at your institution: (Thornton et al., 1997)

☐ assertiveness  
☐ desire to compete  
☐ exercising power

☐ positive attitudes towards authority  
☐ standing out from the group  
☐ willingness to carry out routine work

Please indicate by checking below, which characteristics are typical of **male** students at your institution: (Thornton et al., 1997)

☐ assertiveness  
☐ desire to compete  
☐ exercising power

☐ positive attitudes towards authority  
☐ standing out from the group  
☐ willingness to carry out routine work

☐ Please send me the results of this survey, thanks.

Return to: PACAT  
 Austin Peay State University  
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## APPENDIX C

Percentages of Men and Women Students in Each Concentration

Concentration	Women	Men	Number of Departments	t-test
Accounting	48.0	52.0	26	$t(22) = .88,$ $p = .38$
Finance	49.6	50.4	7	$t(5) = .06,$ $p = .96$
General Business	55.0	45.0	13	$t(12) = 1.7,$ $p = .12$
Business Administration	50.1	49.9	16	$t(15) = .02,$ $p = .98$
Marketing/Management	49.0	51.0	10	$t(10) = .51,$ $p = .62$

t-test involved teaching methods by departments  
 higher percentage of men and those with a higher  
 percentage of women. Each Bonferroni adjusted probability  
 for the category, "Other") fell between .944 and 1.0.

## APPENDIX D

Teaching Methods in Departments with Gender Predominance (N=61)

Teaching Methods	Mean Response - Men	Mean Response - Women	Mean response - all	t-test
Case studies	4.60	4.36	4.51	$t(59) = .51,$ $p = .61$
Computer simulations	3.20	3.19	3.12	$t(59) = .01,$ $p = .98$
Computer tutorials	2.28	2.52	2.36	$t(59) = .64,$ $p = .52$
Distance learning	1.88	1.83	1.75	$t(59) = .15,$ $p = .87$
Films / Videos	4.00	3.86	3.87	$t(59) = .28,$ $p = .77$
Group Discussion	5.32	5.30	5.29	$t(59) = .04,$ $p = .96$
Group Projects	5.16	5.22	5.23	$t(59) = .15,$ $p = .87$
Group simulations	2.68	2.88	2.76	$t(59) = .47,$ $p = .63$
Individual projects	5.20	5.52	5.36	$t(59) = .85,$ $p = .39$
Internships	4.48	4.44	4.27	$t(59) = .07,$ $p = .94$
Lecture	6.52	6.50	6.52	$t(59) = .09,$ $p = .92$
Other	3.12	5.50	3.84	$t(10) = 2.75,$ $p = .02$

Note. The t-test involved teaching methods by departments with a higher percentage of men and those with a higher percentage of women. Each Bonferroni adjusted probability (except for the category, "Other") fell between .944 and 1.0.

## VITA

Susan Paine, born in Clarksville, Tennessee on September 19, 1970, attended grades 1 through 12 at the Clarksville Academy, graduating there in May, 1988. She received her bachelor of the arts degree in English Literature from Transylvania University in Lexington, KY, in May of 1992. She is presently finishing her Master of Arts at Austin Peay State University, in Clarksville, Tennessee.