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## **GENDER-ROLES, LEARNING STYLES AND STUDENT PERCEPTIONS OF "BEST" PROFESSORS: SOME PRELIMINARY RESEARCH FINDINGS**

### **Abstract**

343 students enrolled in business courses in two urban universities in Atlantic Canada rated their best instructors and themselves using Bem's Sex Role Inventory. Findings indicate that a student's gender role is significantly related to perceived gender-role of best instructor chosen. Further, the present study indicates that a student's learning style and gender-role are significantly related. Implications of the present findings are discussed.

Education is one of the most critical functions in any modern society. Yet, no single definition of education or set of educational goals seems to have received universal acceptance. Various writers and educationalists have defined 'education' in widely different ways depending on their specific philosophies and orientations. Thus, while some have looked at education as a tool to increase the individual's specific skills (e.g., Freeman, 1975), others use the term to mean an activity committing a student to a way of life (e.g., Franz, 1972), an activity imparting knowledge to an individual (Aquinas quoted by Pegis, 1948) or even saving the soul of the individual (Kierkegaard, 1946). If for Socrates, the aim of education was to "purgate the character by dialectic" to develop a well-informed citizen, to the "essentialists" the purpose of the education was the moral enlightenment and discipline of the individual(see, Burke, 1955). Variations or extensions of these objectives are also provided by other writers (e.g., Dewey, 1916; Russell, 1926).

It is then no wonder that there is no universal agreement on the characteristics of an effective teacher. To Socrates, the good teacher should act as a good mid-wife-- helping the pupil to bring to birth what (s)he had already conceived. To the Sophists, the good teacher was a good organizer and moralist; to Abelard, the good teacher was a good logician; to Dewey and others, the effective teacher was a good catalyst. Indeed, the difficulties associated with the description of "good teachers" have prompted some to argue for abandoning all research on "teacher effectiveness". For example, Hight (1954; p.7-8) notes that "teaching involves emotions which cannot be systematically appraised and employed and human values which are quite outside the grasp of science..".

This, however, may be an extreme position. Outstanding instructors who inspire and instill knowledge and values stand apart from the mundane and the mediocre. "Good" teachers make us wonder about things and ourselves; often, they teach us ideas that last a life time and touch our innermost beliefs in ways unimaginable by the mediocre instructor.

A possible approach to gauge instructor effectiveness is to assess his or her impact on the learner. Since a major goal of teaching is to effect a change in the pupil, it is perhaps logical to measure the teacher's impact by looking at the pupils (McNeil and Popham, 1973). As Gage pointed out, "...by teacher effectiveness is usually meant the teacher's effect on the realization of some educational objective, defined in terms of desired pupil ... characteristics."(1963; p.116). The student may provide us with greater insights

about what worked and what did not in a learning situation.

The present study follows the above logic and looks at teaching effectiveness from the perspective of the pupil. While several student characteristics and values and situational contingencies are related to instructor effectiveness, our focus here is on two variables namely, the student's own *role perceptions* and *learning style*<sup>1</sup> and their relationship to perceived instructor effectiveness..

A substantial amount of evidence on homosociability makes it seem plausible that students feel an affinity to professors who are similar to themselves (Crosby & Reinardy, 1993). Even from childhood, we tend to play with others similar to ourselves and as adults assort ourselves on the basis of gender and other similarities (Caplan & Larkin, 1991) . Thus, socially developed role preferences may play a role in the selection of best instructors. It is argued in this paper that a student's learning style is related to the role preferences. Since both learning and social role preferences are, at least partially, conditioned through socialization, it is possible that these two variables are interrelated. Thus, certain instructor behaviours and teaching methods may be more appealing to specific types of students.

The present study, thus, aims to find some answers to the following questions:

1. Is a student's gender-role related to the gender role of their best instructor?
2. Is a student's learning style related to own gender role?
3. Is a student's learning style related to gender role of the best instructor?

## Hypotheses

### GENDER-ROLE

One of the most pervasive dimensions used to categorize individuals, whether at work or outside, is gender (e.g., Stangor, Lynch, Changming & Glass, 1992; Williams & Best, 1990). Gendered qualities seem to be an important component of our self-schemas (Bem, 1981a;). Even little children seem to be aware of gender differences and past research findings have highlighted the existence of clear gender stereotypes that guide adult actions and decisions related to role behaviours and occupational choices (Martin, Wood & Little, 1990).

Then, it is not very surprising that many of our images about various occupations are integrally related to the gender of the normal job incumbents. What we know about jobs, in other words, has more to do with what we know about job incumbents (e.g., their gender, status) than job duties (Glick, Wilk & Perreault, 1995). Indeed, one consistent finding in research on occupational images has been that individuals perceive occupations similarly irrespective of their education level, social class area of residence, age or occupational preference. This suggests that individuals organize their images of occupations in highly stereotyped, socially learned manner. Thus, our image of a head librarian is that of a middle aged, intelligent lady wearing glasses, while a construction worker is stereotyped as a strong and rugged young male who drinks beer. Of the components of the image, the most robust appear to be gender-type and prestige associated with the job (Glick et.al, 1995).

Howe (1984) suggested that women students feel closer to their women professors than to their male professors. One past study showed that students usually select as mentors instructors of their own gender (Paludi, De Four, Schneider, Gover, West & Dekelbaum, 1990). Some anecdotal descriptions of how women students relate to their male and female professors (Culley & Portuges, 1985) also provide

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<sup>1</sup> The findings reported in this paper are part of a larger study which assessed the impact of several other student characteristics on choice of best instructors. Space constraints prevent us from discussing these here.

some support for establishing the following hypothesis:

***Hypothesis 1:*** *A university student's own gender-role is likely to be related to perceived gender-role of his or her best instructor.*

## THE CONCEPT OF LEARNING STYLE

Past research on teaching and training recognize that learners are not homogenous in the ways they learn. Richard Mann (1970) and his colleagues in their early work on learning style distinguished eight "clusters" of student behaviour: *compliant* students who accept the values behind the instructional system, *anxious-dependent* students who generally feel incompetent and rely on teachers for support, *discouraged workers* who are dissatisfied with themselves, *independents* who are competent, *heroes* who feel superior and seek admiration, *snipers* who display hostility, *attention seekers* who desire social approval and *silent students* who feel helpless and vulnerable and hence do not participate. Another taxonomy which looks at student reactions to class room events as well as their attitudes toward learning, their teachers and peers classify learning styles into six categories: *competitive* students who learn in order to outperform classmates; *collaborators*, who learn through sharing; *avoidants*, who are uninterested in learning in traditional ways; *participants*, who enjoy learning; *dependents*, who lack curiosity and *independents*, who enjoy autonomy and own deliberation of ideas (Riechmann & Grasha, 1974). Several other learning style taxonomies on the basis of cognitive styles, reasoning approaches and helping patterns currently exist (e.g., Hill, 1971; Erickson, 1974).

The Learning Style Inventory (LSI) developed by Kolb (1976a) is one of the more popular conceptualizations of learning, especially in management training. A major hypothesis in Kolb's learning style theory is that individuals use and prefer different learning strategies that correspond to how effective and comfortable they are when learning. The most efficient and preferred learning method, hence, is one that corresponds to the individual's primary learning style. Kolb (1976b) theorized that learning is a four-stage process involving *concrete experience* (feeling), *reflective observation* (watching), *abstract conceptualization* (thinking) and *active experimentation* (doing). By combining the scores on the above four dimensions, four learner types can be identified: *accommodators*, who combine concrete experience with active experimentation and who focus on getting things done and hands-on experience; *convergers* who like problem solving, decision making, and deductive reasoning and combine active experimentation with abstract conceptualization; *assimilators*, who are strong on abstract conceptualization and reflective observation and emphasize planning, model building, and theory building and *divergers*, who mix concrete experience with reflective observation in their learning strategy and focus on understanding people, imaginative thinking and brain storming. In the more than 20 years since Kolb posited his learning style theory, over 300 published studies have appeared in the management literature incorporating or testing the LSI (Cornwell & Manfreda, 1994; Pinto, Geiger & Boyle, 1994). The LSI has been found to be particularly useful in university settings. Past studies indicate significant relationship between learning style, field of study and pedagogical preferences.

Do the differences between men and women extend to learning styles? Although some researchers have started to compile a database to clearly identify the female learning experience (Philbin, Meier, Huffman & Boverie, 1995), there is not enough data yet to answer this question. There is even less information linking gender-roles to learning style. Available evidence indicates that male approach to learning is more based on rationalism and objectivity while females utilize intuitive, personal knowledge in learning. Historically, males were encouraged to be active and learn through experimentation. In contrast, girls, historically, were encouraged to play games which were related to family roles and which involved expression of empathy and sensitivity (Das, 1998). On average, men and women score differently on the LSI, women learning most by watching, feeling and thinking (Philbin, et al, 1995). Based on the limited

evidence linking gender roles with learning experience, the following hypotheses are offered in an exploratory and inductive mode:

***Hypothesis 2:** A university student's learning style is likely to be related to own gender-role.*

***Hypothesis 3:** Masculine students are more likely to prefer an active experimentation learning style.*

***Hypothesis 4:** Feminine students are more likely to prefer a reflective observation learning style.*

***Hypothesis 5:** A student's learning style is likely to be related to the gender-role of the most preferred university instructor.*

## **Research Methodology**

### ***Sample.***

343 students in two universities in Atlantic Canada participated in the present study. It was decided that at least one year of university education is required to validly respond to the questions in the present study. Using a modified cluster sampling technique, students who were enrolled in the second, third and fourth year business courses were selected for inclusion in the study. In the case of one university, which had a graduate program in business, students in selected first and second year graduate business courses were included as well. The final sample consisted of 147 male students and 196 female students. 239 of the responding students were working toward their undergraduate degrees, 88 for their graduate degrees and the remaining towards certificates or diplomas. Over 81% of the respondents were enrolled full-time in the program. 62% of the respondents were 25 years of age or younger, 20% in the 25-30 age group, 11% in 31-40 age group and the remaining respondents being 41 years of age or older. Over 55% of the students had worked full time for at least two years while over 65% had some prior supervisory or managerial experience.

### ***Research Design***

A self-administered questionnaire survey was used to collect data. Data was collected during regular class meetings. Participation in the survey was voluntary. The participation rates in most classes exceeded 98% and never fell below 90%.

### ***Instrumentation***

Bem's (1981 b) Sex Role Inventory (BSRI) (short form) was used to measure sex roles of the participating students and the best university level instructor they have had in the past. The short BSRI contains thirty personality characteristics of which ten items measure a subject's masculinity and another ten items measure femininity (the remaining ten are not scored). The BSRI treats femininity and masculinity as two independent dimensions rather than as two ends of a single dimension, thereby enabling a person to indicate whether he or she is high on both dimensions ("androgynous"), low on both dimensions ("undifferentiated"), or high on one dimension but low on the other (either "feminine" or "masculine"). In past studies, the Coefficient Alpha for BSRI has ranged from .84 to .87; past test-retest reliabilities have ranged from .85 to .91. Bem (1981b) reports several studies which indicate high construct and predictive validity for BSRI.

Kolb's (1976a; 1985) Learning Style Inventory (LSI) was used to measure the learning styles of participants. While Kolb's ipsative scoring procedure is controversial (e.g., Cornwell & Manfredi, 1994), LSI continues to be a widely used measure of learning style. The internal consistency of LSI range from .82 to .86 for different dimensions (Sims, Veres & Shake, 1989). While the construct validity of LSI is yet to be established conclusively, some past studies have indicated convergence of LSI scores with other measures of learning style and divergence from related constructs such as field independence (e.g., Highhouse and Doverspike, 1987; Sims, Veres and Shake, 1989).

A variety of demographic and background questions were used to assess the student's age, GPA, work experience, grade from the best instructor, year in the program, and so on.

## Findings

Males were more likely to be chosen as best instructors than females - only 35% of the best instructors chosen were female. However, this is partly attributable to the fact that there were fewer female faculty members (less than 30%) in the two universities. Interestingly, there was a more even split when the gender-roles of the instructors were examined - over 25% of all "best" instructors were perceived to be masculine; 22% were feminine; 25% were androgynous and 28% were undifferentiated. While a majority of the respondents were female (57%), there was, again, an almost equal division when their gender-roles were examined - 24% of students saw themselves as masculine, 29% as feminine, 22% as androgynous and nearly 24% as undifferentiated.

To test the first hypothesis, responding student's sex role was analyzed against that of the best instructor chosen by the person. The results of the analysis are shown in table 1. The relationship was significant at  $p < .001$ . Thus, students were more likely to select instructors with similar gender-role identities as their "best" instructors..

To test the second hypothesis, the learning styles of responding students were cross tabulated against their gender-roles. The results provided support for the second hypothesis (see Table 2) indicating that these two constructs are interrelated. The largest percentage of students with masculine gender-role belonged to the converger group while those with feminine gender role belonged to diverger group. Androgynous and undifferentiated students were most likely to be accommodators and assimilators respectively.

Data analysis indicated that masculine students were most likely to prefer an active experimentation learning style ( $p < .0001$ ) and feminine students, a reflective observation style ( $p < .0001$ ). Indeed, as masculinity increased, the preference for active experimentation increased. Similarly, as masculinity decreased, the preference for reflective observation increased, thus indicating that students with masculine and feminine gender roles have differing learning styles. The present study, thus, supported hypotheses three and four.

A cross-tabulation of student learning style with the gender-role of best professor did not show any consistent pattern ( $p > .05$ ). While the results indicated that students with high concrete experience scores preferred a feminine or androgynous style and those with low concrete experience score preferred a masculine or undifferentiated style, there was no overall pattern visible between the four learning styles and gender roles of instructor. Hence, this study did not support hypothesis five.

**TABLE 1**  
**GENDER-ROLES OF STUDENTS AND THEIR BEST PROFESSORS**

Instructor's Gender-role	Student's Gender-Role				Total
	Masculine	Feminine	Andro-gynous	Undifferen-tiated	
	(Column percentages are shown in brackets)				
Masculine	31 (50.8%)	10 (13.8%)	7 (12.5%)	15 (24.6%)	63 (25.1%)
Feminine	7 (11.4%)	29 (39.7%)	9 (16.1%)	11 (18.0%)	56 (22.3%)
Androgynous	5 (8.2%)	19 (26.0%)	35 (62.5%)	3 (4.9%)	62 (24.7%)
Undifferentiated	18 (29.6%)	15 (20.5%)	5 (8.9%)	32 (52.5%)	70 (27.9%)
Total	61 (100%)	73 (100%)	56 (100%)	61 (100%)	251 (100%)
	Chi-square= 108.74	d.f. = 9	p = .00000		

## DISCUSSION

The present study indicates that there is a strong relationship between a student's gender role and gender-role of the faculty chosen as best instructor.. Two possible explanations for this exist: first, the student's choice of best instructor may be significantly influenced by perceived similarity between own values and those exhibited by the instructor (i.e., homosociability may have a strong influence on student choice). Alternatively, influential instructors may be bringing about substantial value changes in students through role modelling. The present findings seem to be more supportive of the first explanation since there was a strong relationship between students' gender and gender-role. Further, the present data indicate that as students gain more work experience, they might prefer a different sex-role. While students with lowest level of work experience were likely to select instructors with varying sex-roles as their best instructor, those with the most work experience were likely to choose instructors who displayed an undifferentiated (40%) or masculine (28%) role. Thus, what happens *outside* the university may play an equally significant role on student preferences. In addition, results of supplementary data analysis which compared student sex-roles against course level (e.g., second year versus fourth year) indicated statistically significant patterns as well<sup>2</sup>.

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<sup>2</sup> Due to space constraints, these results are not elaborated here.

**TABLE 2**  
**GENDER-ROLES OF STUDENTS AND THEIR LEARNING STYLES**

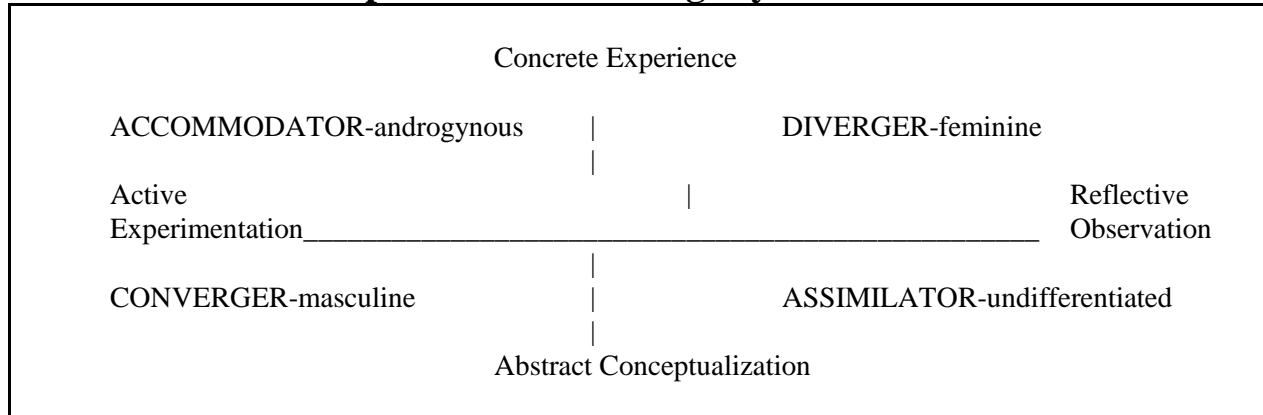
Student Learning Style	Student Gender-Role				Total
	Masculine	Feminine	Andro-gynous	Undifferen-tiated	
	(Column percentages are shown in brackets)				
Diverger	5 (7.6%)	18 (30.6%)	11 (18.6%)	15 (25.9%)	49 (20.2%)
Assimilator	16 (24.2%)	15 (25.4%)	13 (22.0%)	25 (43.1%)	69 (28.5%)
Converger	31 (47.0%)	11 (18.6%)	13 (22.0%)	10 (17.2%)	65 (26.9%)
Accommodator	14 (21.2%)	15 (25.4%)	22 (37.4%)	8 (13.8%)	59 (24.4%)
Total	66 (100%)	59 (100.0%)	59 (100.0%)	58 (100%)	242 (100%)
	Chi-square= 36.02	d.f. = 9	p = .0000		

The present study identified a strong association between student's learning style and gender-role. Feminine students were most likely to be "divergers" while masculine students were most likely to be "convergers". Androgynous students, by and large, exhibited an "accommodator" style while undifferentiated students were "assimilators" (See Figure 1). Since the student gender-role appeared to be related to student gender and work experience, instructors will need to modify their teaching style to meet the unique needs of the class. Students with substantial work experience prefer an androgenous or undifferentiated teaching style while those with little or no work experience seemed to have no strong preferences on the matter. Faculty teaching mature students with several years of experience, hence, may find it desirable to use a teaching style that emphasises hands-on learning, risk taking, leadership development, planning and problem solving.. On the other hand, in freshman and sophomore classes where relatively fewer students are likely to possess considerable work experience, pedagogical methods that encourage deductive reasoning, brainstorming, imaginative and creative problem solving, etc., would appear more useful.

The present study found significant differences in the learning styles of masculine and feminine students. As hypothesized, masculine students showed above average scores for active experimentation while as masculinity decreased, the preference for reflective observation increased. Since the present study

also indicated that gender and gender roles are related, it is advisable that in training programs specifically aimed at women, reflective observation pedagogy may be more useful. On the other hand, in training programs and workshops that primarily cater to men, a different pedagogy (one that emphasizes active experimentation) may seem desirable.

**Figure 1**  
**Relationship between Learning Style and Gender-Role**



While the student learning style and gender role of best instructors were related, this relationship was not statistically significant. The present study did find that students who prefer concrete experience are likely to select instructors with feminine or androgynous gender roles. Students who had a low score on this dimension preferred a masculine or undifferentiated style. Since student gender role and instructor gender role are significantly related, there is still a possibility that learning style and instructor gender role are related, albeit indirectly. Further data analysis using other moderator and intervening variables may provide more clues into the complex relationship between student learning style and instructor gender role.

Gender-type image of university teaching is of particular importance today. As Unger and Crawford (1992) suggested, role modelling is a significant contributor to gender role learning in university students. However, "the university faculty has traditionally been a man's world" (Young, Mackenzie & Sherif, 1980, p.508). In North America, men still dominate the field comprising 73% of all full-time faculty (*Chronicle of Higher Education Almanac*, 1994). In the past, women who entered traditionally male-dominated professions had to develop a strong masculine gender role to survive and succeed (Baslow, 1992). More recently, the pendulum has been swinging in the opposite direction-- there has been an increasing appreciation of relevance of feminine values and behaviours such as compassion, tenderness, warmth, participative decision making, and sympathy (Brabeck & Weisgerber, 1989; Eagley & Mladinic, 1989). Beginning in the 1990s, there has been a lot of interest in the business world to develop "androgynous" managers which in turn implied the value of an androgynous style within the class room. Our present findings question the wisdom of this. In the present study, there were more "best" instructors with a perceived undifferentiated sex-role than any other category (28%). Such instructors were the second choice of masculine students and were closely tied with androgynous instructors for second spot among feminine students. Also, the present data indicated that instructors exhibiting undifferentiated traits were chosen by 40% of the students with work experience of five years or more. In spite of the popularity of androgyny in the literature, instructors exhibiting androgynous traits (while likely to be chosen by androgynous students and to a lesser extent by feminine students), are likely to be unpopular among masculine and undifferentiated students. Thus androgyny, at least based on the findings of this study, seems to be a more risky route than an undifferentiated style.

In summary, it would appear that the differing student learning styles and role preferences require



varying and continuously evolving pedagogical innovations on the part of the teacher-- something that the great teachers always understood and practiced. Ultimately, excellence in teaching, as in most fields, seems to be related to the instructor's sensitivity, flexibility and responsiveness.

## References

Baslow, S., *Gender Stereotypes and Roles*, Pacific Grove, Calif.: Brooks/Cole, 1992.

Bem, S.L. "Gender Schema Theory: A Cognitive Account of Sex-Typing", *Psychological Review*, 1981, Vol.88, pp.354-364 (a).

Bem, S.L., *Bem Sex Role Inventory: Manual*, Palo Alto, California: Consulting Psychologists Press Inc., 1981 (b).

Brabeck, M. and Weisgerber, K., "College Students' Perceptions of Men and Women Choosing Teaching and Management: The Effects of Gender and Sex-role egalitarianism" *Sex Roles*, 1989, Vol.21, pp.841-857.

Burke, E., *Reflections on the Revolution in France*. Indianapolis: Bobbs Merrill, 1955.

Caplan, P.J., and Larkin, J., "The Anatomy of Dominance and Self-Protection" *American Psychologist*, 1991, Vol.46, p.536-537.

*Chronicle of Higher Education Almanac*, September 1, 1994, p.33.

Cornwell, J.M., and Manfreda, P.A. "Kolb's Learning Style Inventory Revisited" *Educational and Psychological Measurement*, 1994, Vol.54, No.2, pp.317-327.

Crosby F.J. and Reinardy, L.M., "Closeness Between Female College Students and Their Professors: A Novel Assessment Technique" *Sex Roles*, Vol.28, Nos 7-8, 1993, pp.477-483.

Culley, M., and Portuges, C. *Gendered Subjects: The Dynamics of Feminist Teaching*, N.Y.: Routledge and Kegan Paul, 1985.

Das, H., *Strategic Organizational Design*, Scarborough, Ontario: Prentice-Hall, 1998.

Dewey, J., *Democracy and Education*, N.Y.: Macmillan, 1916.

Eagley, A., and Mladinic, A., "Gender Stereotypes and Attitudes Towards Women and Men" *Personality and Social Psychology Bulletin*, 1989, Vol.15, pp.543-558.

Erickson, S. *Motivation for Learning*. Ann Arbor, MI: The Univ of Michigan Press, 1974.

Franz, H.J., "The Criteria for being Educated" *Education Theory*, 1972, Vol.22, No.4, pp.395-402.

Freeman, R.B., "Over Investment in College Training?" *Journal of Human Resources*, 1975, Vol.10, No.3, pp.287-311.

Gage, N.L. "Paradigms for Research on Teaching" In N.L.Gage (ed) *Handbook of Research on Teaching*. Chicago: Rand McNally, 1963.

Glick, P., Wilk, K., and Perreault, M., "Image of Occupations: Components of Gender and Status in Occupational Stereotypes" *Sex Roles*, 1995, Vol.32, Nos 9-10, pp.565-582.

Highet, G., *The Art of Teaching*. N.Y.: Vintage Books, 1954.

Highhouse, S. and Doverspike, D., "The Validity of the Learning Style Inventory 1985 as a Predictor of Cognitive Style and Occupational Preference" *Educational and Psychological Measurement*, 1987, Vol. 47, pp.749-753.

Hill, J., *The Educational Sciences*. Bloomfield Hills, MI: Oakland Community College Press, 1971.

Howe, F. "Identity and Expression: A Writing Course for Women" in F.Howe (ed) *Myths of Co-education*, Bloomington, IN.: Indiana University Press, 1984, pp.28-46.

Kierkegaard, S., *Philosophical Fragments*, Princeton, N.J.: Princeton University Press, 1946.

Kolb, D.A., *Learning Style Inventory: Technical Manual*, Boston, MA.: McBer & Co.,1976 (a).

Kolb, D.A., Management and the Learning Process, *California Management Review*, 1976 (b), Vol.18, pp.21-31.

Kolb, D.A., *Learning Style Inventory*, Boston, MA.: McBer & Co., 1985.

Mann, R.D., Arnold, S.M., Binder, J., Cytrunbaum, S., Newman, B.M., Ringwald, J., and Rosenwein, R. *The College Class Room: Conflict, Change and Learning*. N.Y.: John Wiley, 1970.

Martin, C.L., Wood, C.H., and Little, J.K. "The Development of Gender Stereotype Components" *Child Development*, 1990, Vol.61, pp.1427-1439.

McNeil, J.D. and Popham, W.J., "The Assessment of Teacher Competence" in R.M.W.Travers (ed) *Second Handbook of Research on Teaching*, Chicago: Rand McNally, 1973.

Paludi, M.A., De Four, D.C., Schneider, P., Gover, S., West, R., and Dekelbaum, D., *The Mentoring Experiences Questionnaire: Initial Psychometric Analyses*, paper presented at the annual convention of the American Psychological Association, Boston, MA, August, 1990.

Pegis, R. (ed) *Introduction to St.Thomas Aquinas*. N.Y.: Modern Library, 1948.

Philbin, M., Meier, E., Huffman, S., and Boverie, P., "A Survey of Gender and Learning Styles" *Sex Roles*, 1995, Vol.32, Nos. 7/8, pp.485-494.

Riechmann, S., and Grasha, T. "A Rational Approach to Developing and Assessing the Construct Validity of a Student Learning Style Scale Instrument" *The Journal of Psychology*, 1974, Vol.87, pp.213-223.

Russell, B. *Education and Good Life*, N.Y.: Boni & Liveright, 1926.

Sims, R., Veres, J., and Shake, L. "An Exploratory Examination of the Convergence between the Learning Styles Questionnaire and the Learning Style Inventory II", *Educational and Psychological Measurement*, 1989, Vol. 49, pp.227-233.

Stangor, C., Lynch, L., Changming, D., and Glass, B. "Categorization of Individuals on the Basis of Multiple Social Features" *Journal of Personality and Social Psychology*, 1992, Vol.62, pp.207-218.

Unger, R., and Crawford, M., *Women and Gender: A Feminist Psychology*, N.Y.: McGraw-Hill, 1992.

Williams, J.E. and Best, D.L., *Measuring Sex Stereotypes: A Multi-nation Study*, Revised edition, Newbury Park, Ca.: Sage, 1990.

Young, D., MacKenzie, D., and Sherif, C., "In Search of Token Women in Academia" *Psychology of Women Quarterly*, 1980, Vol.4, pp.508-525.