ABSTRACT
          An extensive search of major journals and databases
raises issues and concerns about the current knowledge of women's
learning. Articles and papers on adult women's learning in higher
education were difficult to locate and limited in number. (Only 28
articles were identified in an ERIC search, the manual searches of
journals, and the searches of three Jossey-Bass New Directions
Series.) Scholarship was often based on questionable assumptions
about women's learning, and age was given little attention in
differentiating between adult women across the life span. The
following topics were addressed: classroom behavior and preferences,
women's learning styles, individual attributes and outcomes of
learning, and student-advisor relationships (sexual harassment).
Little attention was paid to the process of learning. Key themes that
emerged included women's self-doubt, women as silent, and women as
connected learners, although there was disagreement among the studies
about these supposed characteristics of women. The study concluded
that emerging themes about women's learning need to be supported by
further research. (The report includes a bibliography listing 28
research articles related to the topic of women's learning in higher
education. Contains 16 references. (Author/KC)

ADULT WOMEN'S LEARNING IN HIGHER EDUCATION
A CRITICAL REVIEW OF SCHOLARSHIP

Elisabeth Hayes, University of Wisconsin-Madison
Daniele D. Flannery, Penn State-Harrisburg

Paper presented at the 1995 Annual Meeting
of the American Educational Research Association
San Francisco, CA

ABSTRACT

An extensive search of major journals and data bases raises
issues and concerns about the current knowledge of women's
learning. Articles and papers on adult women's learning in
higher education were difficult to locate and limited in number.
Scholarship often was based on questionable assumptions about
women's learning. Emerging themes about women's learning need to
be supported by further research.

INTRODUCTION

Today, there are numerous claims that women's ways of
learning are unique. However, no systematic consideration of
published knowledge about women's learning exists. The primary
purpose of this research was to identify, synthesize and critique
literature on adult women's learning in one setting, higher
education. Initially, our goal was to present findings and
conclusions about distinctive attributes of adult women's
learning. However, in the process of the literature search,
unexpected issues arose which raise questions about the nature of
current knowledge about women's learning. The purpose of this
paper is a) to describe the literature review including the
search process, the nature of the literature, and the topics and
themes addressed by the literature; and b) to critically consider
the findings of this literature search, in particular suggesting
limitations of the scholarly knowledge base on women's learning
in higher education.

Several key perspectives provided a context and rationale
for this study. First, participation statistics indicate that
adult women comprise the most rapidly growing segment of the
student population in higher education and continuing higher
education. Accordingly, there are increasing demands for higher
education institutions to provide appropriate educational
programs for these learners.

Second, previous reviews of literature on adult women in
higher education are outdated. The characteristics of adult women
students are changing, along with societal norms and expectations
for women that might affect their learning. The few existing
reviews (for example, Ekstrom, Marvel, & Swenson, 1987) typically
focus on programs and research that characterize adult women as
"reentry women." The assumptions that informed this scholarship
were based on white middle-class women and a deficit perspective

on women's abilities. These assumptions do not reflect either the characteristics of current students or current feminist theory (Hayes & Smith, 1994). Therefore, there is a need to determine whether current scholarship offers new perspectives on adult women and their learning.

Third, no prior reviews have synthesized information specifically about learning of adult women. Other authors have compiled information about educational programs for women in higher education, for example, or demographic characteristics. This information does not offer insight into learning processes or preferences that might have a significant impact on adult women's success in higher education programs.

Finally, adult learning theory and feminist theory support the proposition that adult women may have distinctive needs and preferences as learners. For example, adult women differ from younger female students in their experiential base and their life situations. Adult women have been socialized to conform to gender-related norms that differ from those for adult men. However, existing knowledge about such differences and their significance for adult women's learning has not been assessed.

THE SEARCH PROCESS

Two initial criteria were used to select publications for inclusion in the review. An initial criterion concerned the identification of literature specifically on adult women. We included publications which focused on women over the age of twenty-five (a common definition in the adult education literature) or that focused on adult women as defined by the author in the publication. Articles that focused only on traditional age undergraduate students, and those that did not delineate age differences were not included. Second, we defined learning as having three aspects: process (how learning occurs); product (what is the outcome?); and function (aspects which influence learning, such as gender roles or motivation) (Smith, 1982). Publications concerned with recruitment and retention issues, prescriptions for teaching, program descriptions, or topics otherwise not within this definition of learning were removed from our database.

Literature that dealt with adult women's learning in any higher education setting (community college, two and four year institutions and graduate schools) was identified from the ERIC database, from journals related to higher education, and from pertinent New Directions Series (Jossey-Bass). Our search was limited to literature written within the last ten years.

In an initial search of ERIC, we combined the descriptors women, higher education, and learning, and identified 337 potential sources. However most did not address topics that fell within the parameters of our definition of learning as described above. Few were on adult women as we had defined them. The ERIC search yielded five papers on fiche and eight article references which fit our parameters.

The meager findings from the ERIC search prompted us to do a hand search of eight journals of higher education: Change, Community, Technical and Community College Journal, Initiatives, Journal of Continuing Higher Education, Journal of Extension, Journal of Higher Education, Research in Higher Education, and Community College Review. An additional journal on education more generally, Gender and Education, was also examined. We broadened the parameter of the search somewhat and selected for analysis any article that concerned adult women learners, irregardless of topic. We found 28 articles through this search. However, of those, only 13 met our definition of learning. Two of the articles found in the hand search had also been identified in the ERIC search.

We also did a hand search of three Jossey Bass New Directions Series: Higher Education, Teaching and Learning, and Adult and Continuing Education. Four articles related to women's learning were found.

What did we learn from this search process? First, and unexpectedly, the database pertaining specifically to women's learning in the sources detailed was very limited. Second, the combination of descriptors "women," "higher education," and "learning" were used generically to apply to a wide range of women's experiences in higher education, rather than specifically to women's learning. This contributes to the appearance of a more substantial literature base than actually exists. Third, due to the ill-defined nature of learning in the database, publications on women's learning were not easily located. If we had not adopted the time consuming hand search method, we would have been seriously lacking in what we did find. Most articles identified through the hand search were not among the sources from the initial ERIC search. As we progressed we did realize that gender differences as a descriptor might have yielded relevant articles not also labelled by the descriptor women. Finally, age frequently was not reported in studies of student learning, making it unclear whether adult students were included among the participants.

The following discussion is based on the total of 28 articles identified in the ERIC search, the hand searches of journals, and the searches of New Directions Series. While this database is not as rich as we had hoped, we feel it is useful and appropriate as a source of ideas and issues (rather than definitive conclusions) related to literature on women's learning in higher education.

NATURE OF LITERATURE

Using the literature we identified, what kind of information about women's learning is available? Articles identified through the ERIC search and the handsearch included eighteen empirical studies. The handsearch yielded a higher proportion of empirical work than the ERIC search, reflecting the nature of the journals examined. Of these empirical studies, ten used quantitative

methods, five used qualitative methods, and three used a combination of quantitative and qualitative approaches. Only one study used an explicitly feminist conceptual framework. While a detailed critique of the empirical studies in the two searches is beyond the scope of this paper, much of this research had significant limitations. Some of the research was explicated superficially, leading the reader to believe that a survey or a series of qualitative interviews were some sort of afterthought to gather a little information on a particular topic. There were instances of over-generalization and other types of sexism in research design and in interpretation (Eichler, 1988).

Ten articles were more conceptual or descriptive in nature, including summaries of other research on a particular aspect of women's learning or gender differences. Because the New Directions Series are intended to address the application of knowledge rather than to disseminate research per se, all articles from these series were not reports of original research. However, most of these articles made some reference to empirical studies or other sources for support. <u>Women's Ways of Knowing</u> (Belenky, Clinchy, Goldberger & Tarule, 1986), was the primary source cited. However, there were a number of occasions when authors made unsubstantiated statements about women's learning.

Some common issues emerged in the literature as a whole. First, some authors made assertions about adult women's learning based on research findings with school children, apparently with the assumption that women's characteristics as learners do not change from childhood to adulthood. For example, Ramirez (1973) was cited in one article as the source for a number of statements about Hispanic women's learning. However, Ramirez studied hemisphericity in Hispanic children, not adults. Second, in a similar manner, results of studies on cognitive processes of traditional college-age (18 to 21 year old) women were extended to all women students. In one article, for instance, research by Miller, Finley, and McKinley (1990), which had been conducted with traditional undergraduate students, was cited in a description of gender differences in adult student learning. The study, along with others, was uncritically extended to adult women. Third, potential differences among adult women based on age were frequently not mentioned at all, or not considered when findings were discussed. For example, one study involved female participants from 18 to 65 years of age, yet did not use age as a variable potentially related to learning. Given the tremendous changes in women's roles and experiences over the last few decades, it would seem likely that a 25 year old woman might have very different learning abilities and preferences than a 65 year old! Finally, some authors used psychometric instruments or male-based conceptual models such as those of Piaget for studying women's learning, without any attention to potential gender biases.

Reflecting on what kind of literature we found, what did we learn? First, there is a limited empirical body of knowledge about women's learning in these publications. Most of this work

has not been conceptualized within feminist frameworks. Second, many authors make generalizations about women learners based on questionable evidence, either due to limitations in their own studies or by indiscriminate use of other research. Finally, age has been given little attention in differentiating between the learning of girls and adult women, or between adult women across the life span.

TOPICS ADDRESSED

What topics were addressed in the literature? We identified four general areas of focus: classroom preferences and behavior, women's learning styles; individual attributes and outcomes of learning; and student/advisor relationships.

Classroom behavior and preferences received considerable attention in the literature we reviewed. Specific topics that were addressed included gender differences in classroom interactions, students' perceptions of gender differences in classroom behavior, classroom climate and its relationship to women's learninc. women's feelings and behavior in the classroom, women's percepti s of classroom learning experiences, and classroom learning preferences of low income women in higher education. Women's learning styles included articles focusing on topics such as field dependence/independence, cognitive styles, and models of intellectual development. Much of the latter work relied on Women's Ways of Knowing (Belenky, et al., 1986). Individual attributes and outcomes of learning was a broad category that included comparisons of men and women's self concepts and educational aspirations, and gender differences in GRE scores. The area of Student/advisor relationships included studies of graduate women's experience of sexual harassment by faculty, female students' experiences with sexual attraction and power in doctoral advisement relationships, and women's interactions with male and female advisors.

What might we learn from considering the topics addressed? In a positive sense, some topics suggest that a focus on women learners may draw attention to previously unexamined issues, such as sexuality in student-educator relationships and its impact on learning. However, such topics can also reflect biased assumptions about when single sex research is appropriate or necessary. Studying only women students may reinforce stereotypes, such as sexuality as a women's issue.

Though our review was limited in scope, it suggests that there has been little attention directed to the process of learning for women. Our search revealed that while the work of Belenky et al (1986) on women's ways of knowing is widely cited, their particular line of research was not continued in many empirical studies in the sources we reviewed. We found only one description of an empirical study (Loughlin & Mott, 1992) that extended this work and provided new insights into Belenky et al.'s concepts. Furthermore, there was no research on potentially distinctive aspects of women's "ways of learning"

which differ from the epistemological bases of knowing studied by Belenky et al (1986).

Also informative is the consideration of what areas have not been addressed. Psychological lenses were the primary perspectives through which the research we found had been filtered, which affected the topics that were perceived to be salient and important. Only one study was grounded in a sociological framework (Black, 1989). As noted previously, research conducted from an explicitly feminist stance was also extremely limited. Several studies, though not explicitly feminist, offered some insight into issues of sexism in the power relationships involved in learning. In general, not addressed were issues related to the social construction of knowledge, learning, learning situations, and of the social determinants of gender roles and gender norms. Just six articles made any reference to race or ethnic group of women in their discussion, and only three devoted significant attention to racial or ethnic differences among women. Of these, one was focused exclusively on Hispanic women (Nieves-Squires, 1991). Another study (Saul, 1992) compared the learning experiences of female international students and USA students. A third (Pearson, 1992) discussed the combined relationship of culture and gender to learning styles. Only one article (Beckerman & Fontana, 1987) treated class as a significant factor affecting learning and gender differences. Clearly, there is need for greater attention to how adult women's particular social, economic, educational and historical conditions interact with their learning endeavors in higher education.

KEY THEMES

What insights about women's learning are suggested by this literature? We approached this question by looking for common themes about women's learning across the topic areas. Three themes were particularly evident in these articles: women's self-doubts, women as silenced, and women as "connected" learners.

Women's self-doubts or lack of confidence in their learning abilities was an idea that appeared in many sources. Gallos (1992, p. 3) provides a particularly vivid description of women's fears:

> The women felt deep terror that they would not be able
> to understand, that they wouldn't know what to do, that
> they would demonstrate they did not belong, that they
> would show everyone their dumbness.

The theme of Women as silent was linked to women's self-doubts. Women's silence in classroom situations was attributed in some sources to their self-doubts. Other authors described how women were silenced by classroom interactions and men's domination of discussions. Kelly (1991), for example, found in her study that men talked more frequently and controlled the conversation in mixed gender learning groups.

Women as connected learners includes the ideas that women

tend to prefer learning in ways that allow them to connect new concepts to personal experience; to integrate cognitive and affective learning; and to engage in communal as opposed to solitary knowledge-building (MacKeracher, 1993).

What have we learned thus far from our examination of themes and other ideas in this literature? First, while these themes were prevalent, the findings of some studies suggested that they might not hold true for all or most adult women. Hayes (1992), for example, found that women were perceived to be more vocal in classes than men, in contradiction to the view of women as silent. Pearson (1992) cites research using Kolb's inventory that found a majority of women preferred perceiving new information though concrete experience - but that majority was only 59% of the research participants. Richardson and King (1991) reviewed a wide range of quantitative studies of learning approaches, and found no consistent gender-related differences.

Secondly, we found few attempts to "get beneath the surface" of these themes to explain or theorize about women's learning. An informative exception was Black's (1989) study of adult women students in a secretarial skills program. Her classroom observations suggested that students were passively conforming to the dictates of the teacher, the prescribed curriculum, and external examinations. However, student interviews revealed that the women were quite critical of the course content, but placed priority on performing well to earn qualifications for better employment. To describe the women as simply "conformist" was therefore misleading. Black, citing Harding (1986), states that much feminist theory still is a 'rewriting of old tunes,' and points out the need to develop new sociological theories that more adequately account for women's behavior.

A third insight concerns the significance of context in determining the characteristics and processes of women's learning. The traditionally competitive and frequently impersonal climate of higher education classes certainly has a role in fostering self-doubts and silence among women, characteristics that may not typify their learning experiences in other settings. Further, to what extent might women's presumed preference for noncompetitive, "connected" forms of learning be linked to doubts about their abilities in this context, rather than to more intrinsic learning styles?

Finally, some assertions about women's learning echoed characteristics that have been attributed more generally to adult learners. The desire to relate new information to past experience, for example, has been widely described as an aspect of adult learning. How do adult women really differ from adult men in this preference? Some characteristics associated with adult women's learning might seem distinctive in the context of higher education because they contrast with characteristics of the traditional-age undergraduate student. Perhaps age or increased life experience beyond formal education may be more significant than gender as the origin of these characteristics.

CLOSING COMMENTS

Thus far, we would conclude there is not much work on women's learning in higher education and there is an extreme need for more research. However, we are asking questions regarding our search. First, we must ask, what is learning? Are we defining learning too narrowly? Are there multiple perspectives of adult learning which can't be pinned down in the way we tried through our search - Or is it that there is very little study of adult learning, much less adult women's learning being done? Second, how does choice of descriptors, the way publications are labelled, and the structure of existing data bases affect our access to information about women's learning? We realized the necessity of ferreting out the nuances of descriptor categories. For example, we found that the descriptors women, females, and gender each produce different references. Third, what sources of information about women's learning might not be included in the data bases and journals we examined? We relied only on more publicly distributed documents for review. Dissertations are one example of research that is not necessarily published in ERIC or in other journals. We are now examining dissertations for research on women's learning. A fourth question is whether research on adult women's learning in other settings might be more extensive. One of our initial assumptions was that adult women's learning might be of particular interest in higher education because of their growing numbers as students. They are also more accessible as research participants to researchers in a higher education setting. However, we may find pertinent research on women's learning in other educational settings and literature. Women's learning may be quite different in these settings as well.

Finally, the results of our search raise questions about the distinctive nature of women's learning. The literature we reviewed does not provide enough evidence to either confirm or disconfirm popular assumptions about women as learners. We have become quite aware of the need for caution in accepting assertions about adult women's learning without more support.

REFERENCES

Beckerman, A. & Fontana, L. (Fall, 1987). Perceptions and Aspirations of community business students: Does gender make a difference? Community College Review, 15(2), 51-58.

Belenky, M.F., Clinchy, B.M., Goldberger, N.R., Tarule, J.M. (1986). Women's ways of knowing. New York: Basic Books.

Eichler, M. (1988). Non-sexist research methods: A practical guide. Boston: Allen & Unwin.

Ekstrom, R., Marvel, M., & Swenson, J. (1987). Educational

programs for women. In Klein, S. (Ed.). <u>Handbook for achieving sex equity through education</u>. (pp. 431-453). Baltimore: Johns Hopkins University Press.

Gallos, J. V. (1993). Women's experiences and ways of knowing: Implications for teaching and learning in the organizational behavior classroom. <u>Journal of Management Education</u>, <u>17</u>(1), 7-26.

Hayes, E. (1992). Students' perceptions of women and men as learners in higher education. <u>Research in Higher Education</u>, <u>33</u>(3), 377-393.

Hayes, E. & Smith, L. (1994). Women in adult education: An analysis of perspectives in major journals. <u>Adult Education Quarterly</u>, <u>44</u>, 201-221.

Kelly, J. (1991). A study of gender differential linguistic interaction in the adult classroom. <u>Gender and Education</u>, <u>3</u>(2), 137-143.

Loughlin, K. & Mott, V. (1992). Models of women's learning: Implications for continuing professional education. In Bassett, H. & Marsick, V. (ed.). <u>Professionals' Ways of Knowing: New Findings on How to Improve Professional Education</u>. New Directions in Adult and Continuing Education, No. 55. San Francisco: Jossey-Bass, 79-88.

Miller, C.D., Finley, J. & McKinley, D.L. (1990). Learning approaches and motives: Male and female differences and implications for learning assistance programs. <u>Journal of College Student Development</u>, <u>31</u>, 147-154.

Mott, V.W. (1991). Women's ways of knowing: Effects of success in a man's world. In <u>Professionals' Ways of Knowing and the Implications for CPE</u>. Preconference Proceedings of the Commission for Continuing Professional Education of the American Association of Adult and Continuing Education, Montreal, Canada. (ED 339 848).

Nieves-Squires, S. (1991). Hispanic women: Making their presence on campus less tenuous. ERIC ED 334 907.

Pearson, C. S. (1992). Women as learners: Diversity and Educational Quality. <u>Journal of Developmental Education</u>, <u>16</u>(2), 2-8, 10, 38.

Ramirez, M. & Casteneda, A. (1974). <u>Cultural democracy, biocognitive development and education</u>. New York: Academic Press.

Richardson, J. T. & King, E. (1991). Gender differences in the

experience of higher education: Quantitative and
qualitative approaches. Educational Psychology, 11(3,4),
363-382.

Smith, R.M.   (1982).   Learning how to learn. New York:
Cambridge.

Author Contact Information:

Dr. Elisabeth Hayes
University of Wisconsin-Madison
Dept. of CAVE
225 N. Mills St. - 276 TEB
Madison, WI 53706
(608) .63-0774
erhayes@macc.wisc.edu

Dr. Daniele Flannery
Penn State- Harrisburg
W 351 Olmsted Bldg
Middletown, PA 17057
(717) 948-6213
ddf3@psuvm

BIBLIOGRAPHY OF SOURCES ON WOMEN'S LEARNING
(database for the analysis)

Beckerman, A. & Fontana, L. (Fall, 1987). Perceptions and Aspirations of community business students: Does gender make a difference? Community College Review, 15(2), 51-58.

Beer, C. T. (1988). Returning women: Their perceptions of the social environment of the classroom. Initiatives, 52(1), 11-17.

Beer, C. & Darkenwald, G. (1989). Gender differences in adult student perceptions of college classroom social environments. Adult Education Quarterly, 40(1), 33-42.

Black, E. (1989). Brave new world? Aspects of office skills training in a college of further education. Gender and Education, 1(2), 127-137.

Collard, S. & Stalker, J. (1991). Women's trouble: Women, gender and the learning environment. In R. Hiemstra (ed.) Creating Environments for Effective Adult Learning. New Directions for Adult and Continuing Education, No. 50. San Francisco: Jossey-Bass, 71-81.

Dunn, B. R. (1988). Gender differences in EEG patterns: Are they indexes of different cognitive styles? ERIC ED 300 416.

Egan, K. S. (1992). Constructivists' use of mentoring for success in broadcast academe. ERIC ED 361 806.

Ethington, C. A. & Wolfle, L. M. (1986). Sex differences in quantitative and analytical GRE performance: An exploratory study. Research in Higher Education, 25(1), 55-67.

Gallos, J. V. (1993). Women's experiences and ways of knowing: Implications for teaching and learning in the organizational behavior classroom. Journal of Management Education, 17(1), 7-26.

Gallos, J. V. (Winter, 1992). Educating women and men in the 21st century: Gender diversity, leadership opportunities. The Journal of Continuing Higher Education, 2-8.

Hayes, E. (1989). Insights from women's experiences for teaching and learning. In Hayes, E. (Ed.) Effective teaching styles. New Directions for Continuing Education No. 43. San Francisco: Jossey-Bass.

Hayes, E. (1992). Students' perceptions of women and men as learners in higher education. Research in Higher Education, 33(3), 377-393.

Heinrich, K. T. (September/October 1991). Loving partnerships: Dealing with sexual attraction and power in doctoral advisement relationships. Journal of Higher Education, 62(5), 515-538.

Henning-Stout, M. (1991). Gender issues in training: Voices at the margins of school psychology. ERIC ED 340 063

Johnsrud, L. K. (1991). Mentoring between academic women: the capacity for interdependence. Initiatives, 54(3), 7-17.

Kelly, J. (1991). A study of gender differential linguistic interaction in the adult classroom. Gender and Education, 3(2), 137-143.

Loughlin, K. & Mott, V. (1992). Models of women's learning: Implications for continuing professional education. In Bassett, H. & Marsick, V. (ed.). Professionals' Ways of Knowing: New Findings on How to Improve Professional Education. New Directions in Adult and Continuing Education, No. 55. San Francisco: Jossey-Bass, 79-88.

MacKeracher, D. (1993). Women as learners. ERIC ED 362 644.

Miller, C.D., Finley, J. & McKinley, D.L. (1990). Learning approaches and motives: Male and female differences and implications for learning assistance programs. Journal of College Student Development, 31, 147-154.

Nieves-Squires, S. (1991). Hispanic women: Making their presence on campus less tenuous. ERIC ED 334 907.

Pearson, C. S. (1992). Women as learners: Diversity and Educational Quality. Journal of Developmental Education, 16(2), 2-8, 10, 38.

Richardson, J. T. & King, E. (1991). Gender differences in the experience of higher education: Quantitative and qualitative approaches. Educational Psychology, 11(3,4), 363-382.

Roundtree, J. (1994). Participation in higher education among adult women. Community/Junior College Quarterly of Research and Practice, 16(1), 85-94.

Saul, J. R. (1992). Women speak about their learning experiences in higher education. Initiatives, 55(1), 43-51.

Savage, H. L. (1983). Field dependence-independence as a factor in the academic and career evolution of women majors in the broad-gauge discipline of home economics. Research in Higher Education, 19(1), 109-123.

Schneider, B. E. (January-February 1987). Graduate women, sexual harassment, and university policy. Journal of Higher Education, 58(1), 47-65.

Schroeder, D. S. & Mynatt, C. R. (September/October 1993). Female graduate students' perceptions of their interactions with male and female major professors. Journal of Higher Education, 64(5), 555-573.

Tarule, J. M. (1988). Voices of returning women: Ways of knowing. In L. H. Lewis, (ed.). Addressing the Needs of Returning Women. New Directions for Continuing Education, No. 39. San Francisco: Jossey-Bass, 19-33.