The Career Patterns and Hiring of Women Administrators:

A Research Proposal

by

Jean Stockard

Submitted to the
Center for Educational
Policy and Management
University of Oregon
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Contents

Appendix B

A Tentative Outline for the Proposed Monograph

Chapter One: Theoretical Background

This chapter will review the nature of sex inequities in the labor force and in education. The possible reasons underlying these inequities will be reviewed, concentrating on theories from economics and sociology. The research questions to be explored in the monograph will be presented.

Chapter Two: Comparison of Men's and Women's Career Patterns

This chapter will explore the career patterns of men and women educators using the data from the Oregon State Department of Education. The experience of men and women will be compared and the ability of human capital and internal labor market theory to account for any inequities will be explored.

Chapter Three: Successful Women Administrators

This chapter will examine the career patterns of women who have attained top line positions in school administration. Their typical career patterns will be examined, the experiences of those with greater and lesser occupational prestige will be contrasted, and the patterns that lead to different final positions will be explored.

Chapter Four: The Extent of Change

In this chapter recent trends toward equality will be examined. Data on enrollment in training programs as well as on hiring will be reviewed. Contrasts in the career patterns of men and women in the 1970's and 1960's in Oregon will be made.

Chapter Five: What Promotes Change

This chapter will examine the data on hiring process for administrators in Oregon schools in 1977-78. The discussion will focus on the conditions within a district that are most likely to prompt the hiring of women into administrative positions.

Chapter Six: Summary and Implications

The findings presented in the earlier chapters will be summarized and integrated, The implications of the findings for theories regarding sex inequities will be discussed. The practical implications of the work for administrative applicants and for school districts wishing to develop more equitable hiring practices will also be explored. Finally, future research needs will be suggested.

Men's and Women's Careers in Education

A Research Proposal

by

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submitted to

Center for Educational Policy and Management
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Eugene, Oregon

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Abstract

This project will examine the ability of human capital and internal labor market theories to account for sex inequities in the education profession. The project will also examine the impact of the women's movement and equal employment legislation on sex differences in educational career patterns. Data from the Oregon State Department of Education will be used to trace the careers of men and women who were newly hired teachers in 1967-68. The effect of entry position and of education and continuity of experience on career achievements will be studied using transition matrices and regression equations. In addition, using the population of all Oregon educators, the probability of women moving into administration in the late 1960's will be compared with the probability of such moves in the late 1970's. The results of this research will be reported in a monograph along with other work currently being conducted in this area by the principal investigator.

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Objectives and Intended Outcomes

I propose in this research to expand my studies of sex inequity in the education profession by directly comparing the career patterns of male and female educators and exploring the extent to which sex differences in experience and training can account for variations in these career patterns. I will also examine the extent to which sex differences in educational career patterns have changed since the advent of the women's movement and equal employment opportunity legislation. This project directly relates to CEPM's mission concerns with personnel administration and equity and directly builds upon work already conducted in the Center.

The results from this project will be reported in a monograph that will also include the results of my current study of the career patterns of women line administrators and hiring patterns that promote and/or hinder the hiring of women into administrative positions. The proposal for this current project is in Appendix A, and a tentative outline of the proposed monograph is in Appendix B. The monograph will discuss theoretical work that underlies the projects, the methodology and results with each project, and the implications of the results for theories regarding career advancement and sex differences in occupational attainment. I will also discuss the practical implications of the work for aspirants to administrative positions and school district officials who wish to promote equity. Parts of the work may also be written as articles for submission to journals such as Educational Administration Quarterly or Sex Roles, where I have previously published articles. A summary of the implications of the work for practitioners may be written for submission to the series of papers prepared by the Oregon School Study Council for distribution to school officials throughout the state or to a journal

oriented toward practitioners such as Phi Delta Kappan.

I believe that this project should result in a good test of theories regarding sex inequities in the professions and specifically of the internal labor market analysis and human capital theory. The project should also help explain the development of sex differences in occupational attainment of educators as well as the impact of the women's movement and equal employment opportunity legislation on sex inequities and sex differences in career patterns. Besides these theoretical insights, the project should have practical applications. By pointing out sex differences in career patterns the project may result in hints for administrative aspirants on how best to pursue careers and provide suggestions to school districts on practices and procedures that are most useful for developing equity.

Theoretical Background

While about half of all professional educators are women, there is strong sex segregation in the profession. Women are overrepresented in the teaching ranks, especially in elementary schools. Men are overrepresented in administration, an area with greater prestige and higher pay. Within administration there is also sex segregation. Women are most often found in staff administrative posts such as coordinators, consultants, and supervisors, often without direct authority over other professionals. Men are vastly overrepresented in the highest paying line positions of principal and superintendent (Schmuck, 1980). While the proportion of women in administration appears to have grown in recent years, sex segregation remains with the increase of women occuring mainly in the administrative areas that women have traditionally filled (Stockard and Kempner, 1980).

Explanatory Theories: Explanations of these sex inequities come from economic theories as well as characteristics of women educators and hiring officials (see Stockard, 1980, for a complete discussion of this area). Because the analysis of internal labor markets (Doeringer and Piore, 1971; Blau and Jusenius, 1976) focuses on specific organizations and professions in which people work, it is especially applicable to the analysis of career patterns and sex discrimination in the education profession. The internal labor market analysis divides jobs within a profession into those which are filled from outside the group and those which are filled from internal sources by promotion or upgrading. The filling of this second category of jobs is seen as primarily determined by the "internal labor market," the administrative apparatus within the firm and competition among those already hired or within the enterprise. Because the advancement opportunities are generally determined by a worker's original entry-level job, it is suggested that sex segregation in a profession and the different ultimate achievements of females and males can be largely accounted for by the different beginning or entry level jobs that men and women hold (Blau and Jusenius, 1976:192).

Studies in education suggest that the top school district position of superintendent is often linked administratively with the position of secondary principal, which is in turn linked with that of secondary teacher. Elementary teachers can expect to become elementary principals, but elementary principals become superintendents much less often than secondary principals do (Gaertner, 1978; Carlson, 1972, 1979). Thus, the internal labor market analysis would suggest that one reason women are underrepresented in top level administrative posts is that they are less often found in secondary teaching positions than men are.

Yet, the internal labor market analysis cannot fully account for the sex differences in educational career patterns. Approximately half of all secondary teachers are women and an even larger proportion of elementary teachers are women. If entry level position were the sole determinant of later occupational status in the profession it would be expected that half of all secondary principals and at least half of all superintendents would be women. Yet, only about one percent of the principals and less than one percent of all superintendents are women. Thus, it is necessary to look for additional explanatory variables.

Human captial theory (see Stockard and Johnson, 1980:37) posits that variables such as a worker's experience, training, and skills (all part of human capital)account for his or her occupational success. While certainly such human capital variables help account for overall variations in income and occupational status, a number of studies involving the total labor market suggest that even when the sexes are equal in training, skills, and work experience, they still differ in eventual occupational attainment and income (Treiman and Terrell, 1975; Suter and Miller, 1973; Featherman and Hauser, 1976). Within education about as many women as men hold masters' degrees, yet men are still vastly overrepresented in the highly paid administrative posts (Estler, 1975). Thus, it appears that neither the internal labor market analysis nor human capital theory can fully account for sex differences in educators' careers.

Some authors have suggested that women are underrepresented in educational administration because they fail to aspire to administrative posts and because women's opportunities to attain administrative positions are limited by those who control opportunities and hiring decisions. There is some evidence for both perspectives. For instance, men appear to plan their educational

careers to include advancement to higher posts and take courses that prepare them for administration more often than women do (McMillan, 1975; Mansergh, 1976). Yet, women are encouraged by their supervisors to enter administration less often than men are (Fishel and Pottker, 1975; Mansergh, 1976). In addition, those who make hiring decisions, including superintendents and school board members, generally do not favor appointing women to administrative positions (Fishel and Pottker, 1975).

The women's movement of the last decade has encouraged women to live up to their full potential and to explore career areas that were once reserved for men. In addition, equal employment legislation, enacted in the 1970's, has required employers to select workers for advancement on the basis of their actual qualifications, regardless of their sex. While for many years educational administration training programs have primarily enrolled men, recent trends indicate a large increase in women's enrollment. While there has also been an increased hiring of women administrators, this increase appears mainly in staff positions, rather than in the line positions of superintendent and principal (Stockard and Kempner, 1980).

In summary, there is extensive sex segregation within the education profession. While women and men are about equally represented in the field as a whole, men are much more often found in administration. The internal labor market theory suggests that men's and women's different entry level positions result in different career paths. Human capital theory asserts that this sex segregation results from sex differences in education, work experience, and other training. However, empirical studies, mainly in fields other than education, suggest that neither theory can adequately account for sex segregation within the profession. It is probable that both women's

failure to aspire to administration and discrimination against women administrative aspirants have contributed to the sex inequities in the field. Legislation introduced in the mid-1970's has been aimed toward correcting discrimination, and the women's movement has encouraged women to aspire to non-traditional fields.

While some studies have examined career transitions of school administrators (e.g., Carlson, 1979; Gaertner, 1978; March and March, 1977), these studies have often been limited to only one administrative position to one year of movement, or have excluded teachers from the sample. I know of no direct comparison of the career patterns of women and men educators that can directly test the theoretical positions summarized above.

Research Questions: Based on the literature reviewed above, this project will explore the ability of the internal labor market and human capital theories to explain sex inequity in education. The project will also examine the impact of the women's movement and equal employment legislation on sex differences in career patterns. Three general questions will be explored.

First, building on the internal labor market perspective, I will examine the extent to which educators' entry positions in the profession affect their later occupational achievement and the extent to which sex differences in entry positions can account for the sex differences that appear in occupational achievement within the profession. In other words, I will examine the extent to which the different jobs men and women hold when they first enter education can account for the differences that appear in the jobs they hold later in their careers and the tendency for men to have administrative positions more often than women.

Second, to take into account human captial theory, I will explore the extent to which variables such as education, age, and continual experience in the field can account for differences in males' and females' occupational achievement and differences in their career patterns. I will explore both the ability of human capital theory to account for these sex inequities alone and in conjunction with the internal labor market analysis.

Third, recognizing the advent of the women's movement and equal employment opportunity legislation by the mid-1970's, I will explore the extent to which sex differences in patterns of career advancement have changed from the late 1960's to the late 1970's. Such a comparison will help show the impact of the women's movement and equal employment legislation on sex inequities in the education profession and suggest the possibility of future change.

Research Procedures

The population for this study is all certificated personnel employed in public schools in Oregon from 1966-67 through the present. Data have been obtained from the Oregon State Department of Education on all certificated personnel employed in Oregon school districts in each year from 1966-67.[1] These data include each employee's social security number, sex, age, district of employment in the current and the previous year, position and level of employment, salary, and education. Because identifying numbers are available, it is possible to follow a person from his or her year of

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1. Some data from Portland are missing in the early years. This may lead to modifications of the sampling designs proposed below in order to assure the most accurate and representative sample.

entry into the system through the ensuing years, noting changes in educational status and salary, moves from one position to another, moves from one district to another, and moves in and out of the system. Below the research procedures to be used with each research question are outlined.

Research Question One: To explore the ability of the internal labor market theory to explain sex inequities in the education profession, I will study all educators who entered the profession in Oregon in 1966-67, excluding those with previous teaching experience, and follow their career moves through the present. Thus the sample will include only newly hired, inexperienced teachers in Oregon in the fall of 1966. I will look first at how different entry positions affect later career movements of all educators, regardless of sex. This will test the basic proposition of the internal labor market analysis that entry position is a large determinant of later career success. I will then examine how well the internal labor market theory can explain sex segregation in the profession.

To explore the first issue I will separate the sample into educators with different entry positions: primary teachers (grades K-3), intermediate grade teachers (grades 4-6), junior high teachers (grades 7-9), and secondary teachers (grades 10-12), and those with other positions (e.g., librarian). I will than examine the subsequent career moves of these educators with transition matrices. Table 1 gives an example of a transition matrix from my current study of the career patterns of women line administrators. The transition matrix gives the probablity of moving from one position to another in one year. A matrix will be computed for each transition period (e.g., 1966-67 to 1967-68; 1967-68 to 1968-69) and then these matrices will be aggregated over three year intervals. This will result in four aggregated

transition matrices for each position (1966-67 to 1969-70, 1969-70 to 1972-73, 1972-73 to 1975-76, 1975-76 to 1978-79). Transition matrices for the entire sample (all positions combined) will also be computed for each three year period.

To explore the extent to which an educator's entry position can predict his or her future career patterns the transition matrix for the entire sample will be used to predict the career moves for individuals in any one entry position with a Markov chain. The predicted values will be compared with the actual values using a chi-square statistic to see the extent to which they vary from chance. Table 2 illustrates the use of a Markov chain with my current work. Further details on this method are in the proposal in Appendix A on pages 9-13. If the internal labor market theory is correct, it would be expected that the transitions for the total group would not accurately predict transitions of occupants of different entry positions and the predicted values would be significantly different from the actual values. In other words, employees with different entry positions would have different career patterns.

To examine how well the internal labor market analysis can account for sex segregation in education I will compute transition matrices separately for males and females in each category of entry position given above. These matrices will also be summated over three year periods. Thus for each position category there will be eight matrices; four for females and four for males in three year groups.[2] Markov chains will again be used in the analysis. Looking at each position and within each three year grouping, the transition matrix for males and females combined (used in the analysis described immediately

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2. If there are fewer than 15 to 20 males or females in any of the positions, that position will be combined with an adjacent one.

above) will be used to predict the career moves of males and of females. The predicted values for each sex group will then be compared to the actual values using chi-square. If the internal labor market theory is to account for sex segregation there should be no difference between the predicted and actual values, other than that which can be attributed to chance. In other words, if entry position is the key to future career patterns, the career transitions of females and males with the same entry position should be the same.

In addition to testing the predictions described above, the actual nature of the transitions males and females make will be examined. The proportions in the matrices will be compared and standardized effect parameters obtained in log-linear analysis will be used to determine which cells of the matrices have movement that is greater than would be expected by chance. These parameters will be used to describe the typical career moves of the various subgroups of the sample.

Table 1

An Example of a Transition Matrix

Position in Year j		Position in Year j + 1											
		A1	A2	A3	A4	A5	T1	T2	01	02	03	04	N
	A1	.986	.002	.002	.002	.004	.002	.000	.000	.000	.000	.002	531
	A2	.188	.794	.010	.000	.004	.000	.000	.000	.000	.000	.004	287
	A3	.095	.084	.760	.010	.000	.021	.010	.010	.000	.010	.000	96
	A4	.156	.067	.000	.711	.044	.000	.000	.000	.000	.022	.000	45
	A5	.118	.103	.015	.015	.720	.029	.000	.000	.000	.000	.000	68
	T1	.029	.023	.009	.007	.011	.876	.015	.009	.003	.014	.004	1103
	T2	.023	.099	.031	.000	.015	.008	.824	.000	.000	.000	.000	131
	01	.007	.000	.007	.000	.000	.139	.007	.801	.000	.026	.013	151
	02	.000	.000	.250	.000	.000	.000	.250	.250	.250	.000	.000	4
	03	.012	.000	.012	.000	.000	.112	.012	.012	.840	.000	.000	169
	04	.023	.008	.000	.008	.000	.075	.000	.008	.000	.000	.878	132

A1 = high school principal; A2 = vice principal; A3 = director, supervisor; A4 = coordinator, consultant; A5 = other administrative post; T1 = teacher; T2 = librarian, counselor; 01 = work outside of education; 02 = in school; 03 = not in the paid labor force; 04 = missing data

This matrix gives the probability of moving from one position to another in any given pair of years for a sample of women high school principals. Data in this matrix are all high school principals in the sample.

j = 1933, ... , 1975

Table Two

An Example of a Markov Chain

$$S_1^t \qquad\qquad S_2^t$$

$$\begin{bmatrix} 0 \\ 0 \\ 1 \\ 1 \\ 0 \\ 53 \\ 1 \\ 3 \\ 0 \\ 0 \\ 3 \end{bmatrix}^t \begin{bmatrix} \quad P \quad \end{bmatrix} = \begin{bmatrix} 1.901 \\ 1.493 \\ 1.289 \\ 1.116 \\ .642 \\ 47.099 \\ 1.650 \\ 2.914 \\ .159 \\ .852 \\ 2.885 \end{bmatrix}^t$$

S_1 is the vector of entry positions held by women who were high school principals by 1976 and who entered the work force in 1950 or later. P represents the transition matrix in Table One. To predict the positions of the subjects in year 2, the transposed vector S_1 is multiplied by the matrix P with the result as shown. Successive multiplications of the resulting vector by the transition matrix would yield the predicted distribution of occupations in the end year desired (in this case, 1976). Because the transition matrix is based on all high school principals in the sample and S_1 includes only those who entered in 1950 or later the computations described above would be used to provide an indication of the extent to which career patterns of the later cohort differed from the entire group.

Research Question Two: In examining the ability of human capital theory to explain sex inequities in education I will continue to use the sample of all new teachers who entered the Oregon system in 1967-68. I will first explore how well human capital theory alone can account for sex inequities and then see how well the human capital variables in conjunction with the internal labor market analysis can explain sex inequities.

To explore the usefulness of the human capital model I will use methods common in the staus attainment literature (e.g., Treiman and Terrell, 1975), where an employee's occupational prestige and income are regressed on human capital variables such as an employee's age, education, and continuity of experience. Separate regression equations are computed for males and females, thus allowing a comparison between the sex groups of the impact of each independent variable. By substituting values into the regression equations it is also possible to compare the predicted income and occupational prestige of females and males when they have equal human capital.

Because this study involves only one profession I cannot use standard measures of occupational prestige as a dependent variable as there would be too little variation. I will, however, use the subjects' income and an approximation of occupational prestige as dependent variables. Both of these measures will be computed on the employee's status in the final year for which data are available. The occupational prestige measure will simply be the average salary for occupants of a given position in the final year for which data are available. This will yield an ordering of the positions that reflects their difference in pay. Because both dependent measures are based on income the results with the two measures will probably be similar. Yet, because there is a wide range of salaries within each position (for instance, superintendents in small districts often earn much less than staff administra-

tors in larger district), I believe that both dependent measures should be used.

Both of these dependent measures will be regressed on the subject's age, continuity of experience in education (a dichotomous variable), and level of education attained by 1978-79. Separate equations will be computed for females and males and the regression coefficients and proportion of explained variations will be compared. The mean values for the total sample for each of the independent variables will be inserted in the prediction equations and the resulting predicted dependent values for males and females will be compared. If human capital theory can account for the sex inequities in income and prestige, these predicted values for males and females should be approximately equal.

To explore the extent to which human capital variables can add to the explanation of sex inequities provided by the internal labor market analysis I will first add the entry position of the employee (as dummy variables) to the regression equations described immediately above and compare the results with those obtained earlier. If significantly more variance is explained and if the predicted values for females and males are closer than when only the human capital variables are used as predictors it can be concluded that the human capital and internal labor market perspectives combined explain more than the human capital perspective alone.

As a second test of the combined utility of the two perspectives I will individually match the males and females in the sample by their education attained by 1978-79, the size of the district in which they entered the profession, and the continuity of their educational career experience. Then I will compute transition matrices for the females and males in each entry

position category for each year and aggregate the matrices over three year periods as described earlier. Then, duplicating the method described earlier, I will use the combined transition matrices for males and females in each position to predict the career moves of males and females in each time period. If the predicted values are closer to the actual values than they were without the matching procedure, it may be concluded that the human capital variables add to the explanation provided by the internal labor market analysis.

Research Question Three: The final research question deals with the impact of the women's movement and equal employment opportunity legislation on women's career advancement in education. If the women's movement and equal employment legislation have increased opportunities for women it would be expected that there would be greater movement of women into administrative positions in the late 1970's than in the 1960's.[3] To explore this area I will compare the career moves of all educators in Oregon in 1966-67 to 1967-68 with the moves of all educators from 1978-79 to 1979-80. Transition matrices will be computed for the men and women in both years. The transition matrices for the earlier years will be used in Markov chain fashion to predict the moves for males and for females from 1978-79 and 1979-80. As before, the deviations of the predicted values from the actual values will be tested by chi-square. If there have been significant changes in the decade toward greater equity, women's probability for entering administration should be higher in the later years and the predicted values should differ from the actual values. As before, the transition probabilities and standardized

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3. The separate impact of the women's movement and legislation cannot be tested here because they essentially happened at the same time. To some extent, the project described in Appendix A can test the effect of compliance to legislation by examining hiring practices in districts with varying compliance to the law.

effect parameters will also be examined.

I believe that analyzing these three questions will test the applicability of explanations of sex inequities in education and the extent of recent changes in sex differences in educational career patterns. The results should indicate the typical patterns men and women use to attain administrative posts, thus helping potential administrators plan their careers. The results should also point to areas where inequities are most severe, thus helping school personnel develop programs to achieve greater equity.

The Investigator's Qualifications

This research builds on my previous work in the area of sex equity and educational administration. I am employing most of the techniques to be used in this project in my current work and anticipate no difficulties in completing the analysis. The computer work for the project will be completed on either the UCLA Health Sciences Center computer or on the new University of Oregon computer. Professors Bill Baugh and Joe Stone, both research associates at CEPM, have used the data file and assure me that there should be no trouble in obtaining the subfiles I need or in doing the analysis. My vita attests to my previous experiences and writings and follows.

Work Plan

To complete the work outlined above I will need a research assistant to help with the computer analysis, secretarial help in typing manuscript drafts, and some library assistance in gathering related material.[4] Below the work planned for each month and the people responsible are outlined.

January: Get data files in shape and measures developed (GRA and PI). Do literature search for related articles (Lib. and PI).

February: Analyze research question 1 (GRA and PI).

March: Analyze research question 2 (GRA and PI).

April: Analyze research question 3 (GRA and PI).

May-June 15: Write first draft of results and do any remaining computer work (GRA, PI, and Sec.).

June 15-Aug. 15: Complete final draft of the monograph (PI and Sec.).

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4. It may be possible to hire computer help through the University of Oregon computing center rather than a GRA. The only problem I can foresee with this procedure is if work must be done on the UCLA computer and the U of O programmer could not do that work.

Budget

Personnel

Principal Investigator	my base salary is $18,709
.30 January 1 - June 15, 1981 1.00 June 15 - August 15	
GRA .30 January 1 - June 15	
Secretary (20 days) May-August	
Library Assistant (20 days) ?-January	

Computer tapes	$50.00
Materials and supplies	$200.00
Postage, telephone, freight	$100.00
Printing and reproduction	$300.00*
Data Processing	
Library search	$75.00
Data Reduction	$700.00

* Does not include cost of printing the monograph.

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Appendix A