Journal of Health Occupations Education

Volume 7 | Number 2 Article 4

1992

# The Predictive Value of Selected Intrinsic and Extrinsic Rewards as Determinants of Health Occupations Teachers' Work Satisfaction

Duane Akroyd Ph.D.

Beverly Richards Ed.D., R.N.

Terrance O'Brien Ph.D.

Journal of Health Occupations Education
Fall 1992, Volume 7, Number 2

# The Predictive Value of Selected Intrinsic and Extrinsic Rewards As Determinants of Health Occupations Teachers' Work Satisfaction

Duane Akroyd[1]

Beverly Richards

Terrance O'Brien

---

Abstract: The purpose of this study was to examine the predictive power of selected intrinsic and extrinsic rewards as determinants of health occupations teachers' work satisfaction. A perceived work rewards model of job satisfaction was used as the theoretical model. The sample consisted of all health occupations education teachers in three southern states (N = 348). Results indicated that the combined effects of intrinsic

---

[1]Duane Akroyd, Ph. D., RT(R), is Coordinator and Associate Professor, Health Occupations Education; Beverly Richards, D.Ed., RN, is Associate Professor, Health Occupations Education; Terrance O'Brien, Ph. D., is Coordinator and Associate Professor, Marketing Education; Department of Occupational Education, College of Education and Psychology, North Carolina State University, Raleigh, NC.

and extrinsic variables were significant predictors of health occupations teachers' work satisfaction. The intrinsic variable, task involvement, had the greatest influence upon work satisfaction. Two extrinsic variables, general working conditions " and salary, were significant predictors of work satisfaction, but their contributions were less than task involvement.

---

The Metropolitan Life Survey of The American Teacher (Metropolitan Life Insurance Company, 1984) highlighted a variety of problems facing teachers and the teaching profession. The investigation indicated that low salaries, poor working conditions, lack of prestige, and limited input into school decisions have caused dissatisfaction and excessive turnover in the teaching profession.

Summarizing her research on teacher incentives, Johnson (1986) indicated that while enhancing extrinsic factors (pay, status, etc. ) may initially draw those interested in the teaching profession, the best teachers stay because of intrinsic rewards. Research efforts examining teachers' perceptions of their jobs need to focus on both intrinsic and extrinsic factors.

The reason for examining individuals' perceptions of their jobs is the belief that it has an impact upon participation, absenteeism, and organizational effectiveness (Miller & Monge, 1986; Mottaz, 1985; Scott & Taylor, 1985). An ERIC search from 1980 to the present revealed no studies regarding health occupations teachers' perceptions of their jobs. When the search included all vocational teachers, only a few studies focused on

intrinsic/extrinsic conceptualization of variables in examining job facets that could potentially influence teachers' perceptions of their overall work satisfaction.

While there are a variety of models of work satisfaction, there is evidence that a perceived work reward model may be most appropriate for predicting overall work satisfaction (Mottaz, 1986). The work reward model contends that work satisfaction is an emotional response resulting from the interaction of work rewards and work values. Work rewards refer to the benefits that workers receive from their jobs. Work values are facets of the job the worker considers important. The greater the perceived congruence between rewards and values, the greater the work satisfaction. With this conceptual model, the strength of a specific determinant of work satisfaction is a function of the importance that reward has to the worker and the worker's perception of the amount received. Thus, work satisfaction represents a person-environment fit. In using the perceived reward model, it is important to distinguish between facet satisfaction and overall work satisfaction. Facet satisfaction refers to affective responses to particular aspects of work such as salary, supervision or autonomy. Overall work satisfaction refers to an effective response to the total work environment. Such views of work satisfaction have been offered by Kalleberg (1977), Katzell (1979), Smith, Kendal, and Hulin (1969) and Vroom (1964). Efforts to improve the quality of teachers' working environments require an understanding of how a number of interrelated dimensions or facets of the job relate to overall work satisfaction. Katz and Van Maanen (1977) contended that the various aspects of work form three conceptually and empirically distinct clusters (or facets) of work rewards or loci of work satisfaction. These clusters may be thought of as task, social, and organizational rewards.

They generally correspond to the distinctions commonly made between intrinsic (task) and extrinsic (social and organizational) rewards as reported by Kalleburg (1977) and Gruneberg (1977). Ronen and Sadan (1984), in reviewing work satisfaction as a criterion variable, found that a variety of researchers agreed that a two-factor conceptualization regarding the facets of work (intrinsic and extrinsic variables) seemed to best fit the data (Campbell & Pritchard, 1977; Finifter, 1972; Fox, 1971; Miller, 1980; Wernimont, 1966). Too often, studies of teachers' job satisfaction or factors that impact their perception of their jobs are done using a shot-gun approach: examining myriad variables without utilizing a specific model of work satisfaction or a conceptualization of the reward structures within the work place.

Unlike most secondary teachers who selected teaching as their initial profession and entered the classroom after completing a four-year baccalaureate degree, the subjects of this study entered teaching as a second or third career. Typically, health occupations education (HOE) teachers enter the classroom without the benefit of an introduction to the profession or an internship, such as student teaching, to provide a transition from the work-place and a guided experience into the school setting. Because HOE teachers have had health related work experience prior to teaching, their work attitudes may be different than other teachers who follow a more traditional path to certification. Due to the differences in work experience and educational preparation, it is possible that HOE teachers differ significantly from other teachers in their perceptions of their jobs.

The ability of school districts to attract and retain HOE teachers becomes more difficult when one considers that most of these teachers are certified in a specific health

occupation where job opportunities are generally very good. Thus, such teachers have considerably more job opportunities than others who enter teaching via traditional teacher education programs. The turnover in North Carolina in the 1988/89 school year was 12.7% for HOE teachers (personal communication, Kim Smith, North Carolina State Department of Public Instruction) compared to 7.6% for all teachers (personal communication, Robert Boyd, North Carolina Department of Public Instruction). Not only may HOE teachers view their jobs differently than do traditionally prepared teachers, but their ability to exit the teaching environment easily for other work opportunities increases the importance of identifying factors that are predictors of their overall work satisfaction. Knowledge of specific job facets that teachers perceive as important may be useful information in developing retention and/or recruitment strategies.

## Purpose of the Study

The purpose of this study was to examine the predictive power of selected intrinsic and extrinsic rewards as determinants of HOE teachers' work satisfaction. More specifically the study examined the relationship between overall work satisfaction and intrinsic and extrinsic variables. Intrinsic variables were task autonomy, task significance, and task involvement. Extrinsic variables were general working conditions, salary, supervision, and co-workers. Intrinsic and extrinsic factors functioned as independent variables, while work satisfaction was identified as the dependent variable. The following research questions were derived from the purpose:

1. Do intrinsic and extrinsic constructs significantly predict HOE teachers' perception of their work satisfaction; if so, is there a difference in the contribution of each?

2. Which of the following variables are significant predictors of HOE teachers' perceptions of their work satisfaction: task autonomy, task significance, task involvement, general working conditions, salary, supervision, and co-workers?

3. What is the magnitude of the contribution of any significant variables from question two upon teachers' overall work satisfaction?

## Methodology

### Population

The population consisted of all HOE teachers in Georgia, North Carolina, and Tennessee (N = 348). The names and addresses for the teachers were obtained from the appropriate state agencies.

### Instrumentation

The questionnaire used for this study consisted of three parts. First, the demographic section contained 12 questions related to teaching status, age, gender, years teaching, highest educational level, route to initial certification, number of students taught, immediate supervisor, and highest level of certification. The second part consisted of 22 questions related to the four extrinsic variables. The third part of the questionnaire contained 21 questions related to the three intrinsic variables and three questions related to the dependent variable, overall work satisfaction.

The second part of the questionnaire measured four extrinsic variables that were measured using an instrument developed by Mottaz (1981), who modified scales initially developed by Robinson, Athanasiou, and Head (1969). The first, general working conditions, was the extent to which there were resources to perform the job adequately. It

contained six questions related to physical facilities, equipment, work load, and amount of work. The second extrinsic variable, supervisory assistance, was the degree to which supervisors were perceived as supportive and helpful in job matters. There were six questions related to supervisors' competence, fairness, helpfulness, and performance abilities. The third extrinsic variable, co-workers, was the degree to which colleagues were perceived as supportive and helpful. It consisted of five questions related to fellow teachers' cooperation, competence, willingness to help, and ability to get along with others. The final extrinsic variable, salary, was the extent to which teachers believed their salary was comparable to others performing the same or similar job. It consisted of five questions related to salary satisfaction, salary increases, salary adequacy for job performed, and salary comparable to others in similar positions.

The third part of the questionnaire, measuring intrinsic variables and the work satisfaction variable, was developed by Mottaz (1981). The instrument measured three intrinsic rewards associated with one's work: task autonomy, task significance and task involvement. Task autonomy referred to the degree of self-direction in task performance and included the following examples: I make my own decisions in the performance of my teaching roles, and I am not able to make changes regarding my teaching activities. Task significance was the degree to which the task was perceived as making a significant contribution to work process and included the following examples: My teaching is a significant contribution to the successful operation of this school, and I understand how my work role fits into the overall operation of this school. Task involvement was the degree to which the task was considered interesting and rewarding in itself and included the following

examples: My work provides me with a sense of personal fulfillment, and my work is a very self-rewarding experience. The intrinsic, extrinsic, and work satisfaction variables were rated by respondents using a four point Likert-like scale. Respondents were able to rate each item circling the box marked 4, representing strongly agree or 1 representing strongly disagree. There was a box marked not applicable.

Construct validity measures of intrinsic, extrinsic, and work satisfaction were evaluated through factor analysis by Mottaz (1981). Varimax rotation of the principal component factors yielded distinct factors for each of the previously described variables. He reported coefficient alphas of .92 for autonomy, .79 for significance, .88 for involvement, .71 for general working conditions, .82 for supervisory assistance, .82 for co-workers, .83 for pay, and .77 for overall work satisfaction. The average coefficient alpha for all independent variables was .83.

Data Collection

A questionnaire with cover letter explaining the nature of the study and a postage paid response envelope was mailed to each of the 348 subjects in the population. One return maiLing, two weeks after the fret, was conducted for non-respondents. Two hundred and twenty HOE teachers responded for a 63% return rate. The number of usable questionnaires for analysis was 213 (61 % of the sample) and the return rate by state is found in Table 1.

Data Analyses

All statistical analyses were performed using version 6.04 of PC-SAS (SAS Institute, Lnc., 1987). Descriptive statistics were used to describe the demographic data. Full model multiple regression was used to determine the predictive power of the independent variables

Table 1

Return Rate By State

| State | Number of HOE Teachers | Responses Returned | Percent |
|---|---|---|---|
| Georgia | 114 | 51 | 44.7 |
| North Carolina | 163 | 116 | 71.2 |
| Tennessee | 71 | 46 | 64.8 |
| Total | 348 | 213 | 6 1 . 2 |

regarding teachers' perceptions of their overall work satisfaction. Multiple regression techniques allowed assessment of the relative contribution of each of the independent variables toward predicting the dependent variable while holding constant the effect of the other independent variables. The magnitude of the predictive power of any independent variable also was assessed by examining the standardized regression coefficients from the regression output. A conservative .01 significance level was used in all statistical analysis given the amount of error accounted for by the model.

## Results and Discussion

### Population Demographics

Females comprised 99% (n =208) of the sample and males 1 % (n =2). Mean age of respondents was 45. HOE teachers had an average of eight years in their current positions

and 10 years of total teaching experience. The mean number of HOE students per teacher was 75. Education levels of respondents are reported in Table 2.

The route to initial certification was via the a provisional status for 42 % of the respondents (n =90). Twenty-six percent of the respondents (n = 55) received initial certification from a certification-only program (non-degree), while 21 % of the respondents (n = 44) received certification via bachelors degree programs.

Table 2

Highest Education of Respondents

| Educational Level | Frequency | Percent |
|---|---|---|
| Diploma Nurse | 32 | 15.0 |
| Associate Degree | 63 | 29.6 |
| Bachelors Degree | 81 | 38.0 |
| Masters Degree | 34 | 16.0 |
| Doctoral Degree | 1 | 0.5 |
| No Response | 2 | 0.9 |

Reliability

For the respondents in this study, the average coefficient alpha for all independent variables was .81. Coefficient alphas for each variable were autonomy .80, significance .85, involvement .85, general working conditions .69, supervisory assistance .90, co-workers .82, and pay .71. The coefficient alpha for the dependent variable (overall work satisfaction) in

this study was .81. The mean coefficient alpha for all variables used in this study was .80, which compares very favorably with .83 reported by Mottaz (1981),

Research Question 1

Research question one sought to determine if the combined scores for intrinsic variables and the combined scores for extrinsic variables were significant predictors of HOE teachers' work satisfaction. Forced entry multiple regression was used to answer the question. The scores for all intrinsic variables were combined into one overall intrinsic score and the same procedure was performed for all extrinsic variables. The total score for all intrinsic variables and the total score for all extrinsic variables were regressed upon the dependent variable, work satisfaction. The regression analysis (Table 3) indicated that both intrinsic and extrinsic factors were significant predictors of HOE teachers' work satisfaction.

While the standardized regression coefficients for the intrinsic and extrinsic variables were close, an F test indicated there was a significant difference between the values. Thus, the magnitude of the contribution of intrinsic variables upon HOE teachers' perceptions of their work satisfaction was significantly greater than that accounted for by extrinsic variables (although the difference was not great).

Research Question 2

Research question two sought to determine which intrinsic and extrinsic variables were predictors of HOE teachers' work satisfaction. Forced entry multiple regression was used to answer the question. The results of the regression analysis and standardized regression coefficients (B) for each independent variable are found in Table 4. Together the independent variables accounted for a significant percentage (42%) of the

Table 3

Predictive Value of Intrinsic and Extrinsic Factors Uoon Work Satisfaction

| Variable | Standardized Regression Coefficient (B) |
|---|---|
| Intrinsic | .369* |
| Extrinsic | .316* |
| $R^2$ (for model) = .328 | |
| F (for model) =51.312 | |
| p (for model) = .0001 | |

*p < .001.

variance in the dependent variable. This finding indicates that the linear combination of independent variables effectively predicts HOE teachers' work satisfaction. Ordy three of the seven variables were significant (p c .01 ) predictors of work satisfaction; they were general working conditions, salary, and task involvement.

Research Ouestion 3

Research question three sought to determine the magnitude of the contribution of significant predictors of HOE teachers' work satisfaction. The magnitude of contribution for each significant predictor was determined by its associated standardized regression coefficient

Table 4

Predictive Value of Each Intrinsic and Extrinsic Variable

| Variable | Standardized Regression Coefficient (B) |
|---|---|
| General Working Conditions | .214* |
| salary | . 189* |
| Supervision | .106 |
| Co-workers | -.012 |
| Task Autonomy | -.081 |
| Task Significance | .144 |
| Task Involvement | .402 * |

$12^2$ (for model) = .419
F (for model) = 21.189
p (for model) = .0001

* p < .01.

(B). Values close to 1.0 indicate a very large contribution, while those close to O indicate little or no contribution (Pedhazur, 1982). The variable, task involvement, contributed more to HOE teachers' perception of their work satisfaction (B = .402) than did either of the other two significant variables, general working conditions (B = .214) or salary (B = .189). The remaining independent variables did not significantly contribute to the prediction of HOE teachers' perception of their overall work satisfaction (see Table 4).

Discussion

The results of research question one suggest that both intrinsic rewards (those related to the task of teaching) and extrinsic rewards (those related to organizational and social aspects of the job) are significant predictors of HOE teachers' work satisfaction, with intrinsic rewards having a slightly greater effect on satisfaction. These findings are similar to those of Mottaz (1985), who found both intrinsic and extrinsic rewards to be determinants of work satisfaction for five occupational groups (one of which was public school teachers). In his study, the effect of intrinsic rewards was significantly greater than extrinsic rewards. Lortie (1969) argued that intrinsic rewards were the ones that were most important to teachers. When his study was repeated 20 years later using a similar sample (Kottkamp, Provenzo, & Cohn, 1986), intrinsic rewards were again found to be most important to teachers. Yee (1990) also contended that the norms of the teaching profession are such that teachers attribute greater importance to intrinsic rewards.

While HOE teachers perceived intrinsic aspects as contributing significantly more to their work satisfaction than extrinsic rewards, the difference between the two was very small. This finding differs with previous studies. There may be a number of reasons for the differences. First, most research on teachers' intrinsic/extrinsic orientation sampled few vocational teachers and no HOE teachers. Additionally, most HOE teachers enter teaching after employment in the health care setting, where competition for employees usually creates a higher level of extrinsic organizational rewards (pay, promotion, etc.). Given HOE teachers' previous work orientation, they may value extrinsic variables mom than teachers who enter teaching the traditional way through undergraduate education degrees. While

intrinsic rewards are important to HOE teachers, principals and vocational directors need to be aware that extrinsic rewards associated with the organization may help attract and retain teachers. Although intrinsic variables are often cited as stronger predictors or correlates of teacher Job satisfaction, a number of authors contend that extrinsic organizational variables are also positively related to teachers' perceptions of their schools and jobs (Conley, Bacharach & Bauer, 1989; Kottkamp, 1990; Schneider, 1984).

Research question two found the intrinsic variable, task involvement, to have the single greatest effect upon HOE teachers' perceptions of their jobs. Thus, teachers perceived the task of teaching as interesting and rewarding in itself. This finding is consistent with the early work of Sergiovanni (1966), who suggested that job satisfiers are primarily found in the work itself. Ronen and Sadan (1984), examining the literature regarding the relative contribution of intrinsic and extrinsic job characteristics to overall job satisfaction, found the majority of research identified intrinsic aspects of work as important, with mixed results regarding the effects of extrinsic rewards. In the Metropolitan Life Survey of the American Teacher (Metropolitan Life Insurance Company, 1984), 97% of the respondents agreed that they loved to teach. The findings of this study seem to confirm that HOE teachers also find the task of teaching an intrinsically rewarding one.

While the intrinsic variable of task involvement was significant, there were two extrinsic rewards that HOE teachers also perceived as important contributors to their work satisfaction. Teachers' perceptions of the general working conditions in their schools and the salaries they received were significant predictors of work satisfaction. Generally, if teachers perceived good working conditions (work load, facilities, equipment, and working hours) as

satisfactory and salaries as adequate, they exhibited higher levels of work satisfaction. Keppel, (1986) in comparing the reports from the Holmes Group and the Carnegie Task Force regarding teachers and teaching, noted that both reports considered current salaries to be too low and working conditions to be such that they did not foster professional pride and independence.

Chapman (1984) suggested that beginning teachers know what they will earn and that long service will bring limited salary increases. For HOE teachers, who often come from another profession, their values regarding pay may be very different from teachers who enter the profession through the traditional method. While salary may not be a large contributor to teachers' perception of their jobs, recent economic trends may be changing values related to compensation. In the Metropolitan Life Insurance Company (1984) study, only 37% of the teachers surveyed agreed with the statement "My job allows me the opportunity to earn a decent salary." While salary may not be the most important factor contributing to teachers' perceptions of their jobs, it is a meaningful one.

Working conditions as a variable is considered an extrinsic factor and the presence of a good working environment probably has a direct effect upon the teaching task. While HOE teachers view the task of teaching as an important determinant in their work satisfaction, extrinsic factors that enhance or promote a good teaching environment may be essential to maximize the teaching task. Current and former teachers in the Metropolitan Life Insurance Company (1984) survey recommended reducing the time spent on non-teaching duties to attract and retain good teachers.

HOE teachers' perceptions of their co-workers (an extrinsic variable) was not a significant predictor of their work satisfaction. This finding is consistent with that of Chapman (1984), who found that peers had little influence on the job satisfaction of teachers. Lortie (1969) also observed that the peer group had no effective control over the distribution of work rewards for teachers. Because there is usually only one HOE teacher per high school, they have very limited contact with other HOE teachers and possibly limited contact with other teachers in their own schools.

Task significance and task autonomy (both intrinsic variables) were not significant predictors of HOE teachers' work satisfaction. While autonomy is generally considered a desirable condition, it was not a significant predictor. Most professionals are assumed to possess autonomy in their work. While teaching is usually referred to as a profession, research has shown that the increasingly bureaucratic and regulated environment in schools make true professionalism difficult at best (Darling-Hammond, 1984; Metz, Hemmings & Tyre, 1988; National Education Association, 1987; Public School Forum of North Carolina, 198'7). Concerns regarding equity, minimum standards, and legal precautions are perceived to de-skill teachers by shrinking their tasks in what is often referred to as teacher proof units of curriculum and instruction where teaching is reduced to telling, knowledge is seen as the accumulation of facts, and learning is equated with recall (Lanier & Sedlak, 1989; Wise, 1989). Teachers may perceive that they have no significant autonomy in an environment in which they have restricted choices in determining what and how to teach.

## Conclusions and Recommendations

Attracting and retaining teachers is becoming more important today as the supply of teachers continues to lessen ( Murnane, Singer, Willett, Kemple & Olsen, 1991). It becomes even more difficult attracting and retaining HOE teachers when good salaries in the health professions are higher than HOE teachers would receive in high school HOE programs. School administrators need to develop strategies that directly impact the work reward values that HOE teachers perceive as most important. The Findings of this study suggest that methods to improve working conditions in schools that may enhance the teaching task could be helpful. Each school environment varies, and assessment of working conditions needs to be organization specific. What administrators believe is important may not be important to teachers. Teachers should have input into school operations that directly affect their teaching.

Teaching in today's schools is marked with uncertainty. There is continuous debate over pedagogy, learning theory, curriculum, and academic goals. Perhaps the most serious consequence of these debates has been that teachers' individual passions and creativities are squeezed out by the barrage of requirements and ultimately, a shift in focus occurs. Thus, in . many schools the day-to-day working conditions have become personally dispiriting and teachers' satisfaction, creativity, and overall sense of efficacy have been drained (Darling-Hammond, 1988; Johnson, 1987). Schools are organizations, and administrators need to examine the impact of the organizational practices upon teachers' abilities to perform their jobs best.

While salary is not necessarily the most crucial factor in HOE teachers' perceptions of their jobs, it is important. School administrators need to realize that HOE teachers have a variety of marketable employment skills that may necessitate a closer look at salary scales. While school districts have limited funding, they may need to look at innovative funding sources. HOE program graduates are potential health care professionals. Given the high demand for virtually all health specialties local hospitals or medical centers may be willing to provide funds to help finance part of an HOE teacher's salary or part of a program's costs. Pitt County Memorial Hospital in Greenville, North Carolina, is committed to helping increase the number of students entering the health professions. The hospital and school district have worked together to finance several new HOE programs in the county. This is a good example of an effective collaborative model involving a school district and a potential employer.

Administrators have difficulty directly affecting teachers' intrinsic values regarding teaching, but they can modify extrinsic variables in the environment to maximize the effect of such intrinsic values. Educational leaders need to determine what changes can be made in the conditions under which teaching is performed to make its practice more adventuresome and more rewarding and thus reduce the loss to both the profession and to society. This study has provided some information that may be useful in examining and improving the working conditions for HOE teachers. The reform of schooling and the school as a workplace are inseparable. The public cannot expect teachers to step forward to serve in schools that discourage their best efforts. If the quality of teaching and the retention of good teachers is to be improved, then the school as a workplace must also be improved.

References

Campbell, J. & Pritchard, R. (1977). Motivation theory in industrial and organizational psychology. In M. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally.

Chapman, D. (1984). Teacher retention: The test of a model. American Educational Research Journal, 21, 645-658.

Conley, S., Bacharach, S., & Bauer, S. (1989). The school work environment and teacher career dissatisfaction. Educational Administration Quarterly, 25, 58-81.

Darling-Hammond, L. (1988). Policy and professionalism. In A. Lieberman (Ed.), Building a professional culture in schools (pp 55-78). New York Teachers College Press.

Darling-Hammond, L. (1984). Beyond the commission reports: the coming crisis in teaching. Santa Monica, CA: Rand.

Finifter, A. (Ed.). (1972). Alienation and the social system. New York John Wiley.

Fox, A. (1971). A Sociology of work in industry. Toronto: Macmillan.

Gruneberg, M. (1979). Understanding job satisfaction. New York Wiley.

Johnson, S. (1987). Schoolwork and its reform. Paper presented at the meeting of the American Educational Research Association.

Johnson, S. (1986). Incentives for teachers: What motivates, what matters. Educational Administrative Quarterly, 22, 54-79.

Kalleberg, A. (1977). Work values and job rewards: A theory of job satisfaction. American Sociological Review, 42, 124-143.

Katz, A. & Van Maanen, J. (1977). The loci of work satisfaction: Job interaction and policy. Human Relations, 30, 469-486.

Katzell, R. (1979). Changing attitudes toward work. In C. Kerr and J. Resow (Eds.), Work in America (pp 35-57). New York: Van Nostrand.

Keppel, F. (1986). A field guide to the land of teachers. Phi Delta Kappan, 68, 18-23.

Kottkamp, R. (1990). Teacher attitudes about work. In P. Reyes (Ed)., Teachers and their workplace. Newbury Park: Sage Publications.

Kottcamp, R., Provenzo, E., & Cohn, M. (1986). Stability and change in a profession: Two decades of teacher attitudes, 1964-1984. Phi Delta Kappan, 67, 559-567.

Lanier, J. & Sedlak, M. (1989). Teacher efficiency and quality schooling. In T. Sergiorvanni (Ed.), Schooling for tomorrow (pp 118-145). Boston: Allyn Bacon.

Lortie, D. (1969). The balance of control and autonomy in elementary school teaching. In A. Etzioni (Ed), The semi-professions and their organizations. (pp 1-53). New York: Free Press.

Metropolitan Life Insurance Company. (1984). The American Teacher. New York Author.

Metz, M. Hemmings, A., & Tyre, A. (1988). Phase I of the teacher working conditions: final report. Madison: University of Wisconsin, Center for the study of effective secondary schools.

Miller, J. (1980). Individual and occupational determinants of job satisfaction. Sociology of Work and Occupation, 7, 337-366.

Miller, K. & Monge, P. (1986). Participation, satisfaction, and productivity: A meta-analytic review. Academy of Management Journal, 29, 727-753.

Mottaz, C. (1986). Gender differences in work satisfaction, work-related rewards and values, and the determinants of work satisfaction. Human Relations, 39, 359-378.

Mottaz, C. (1985). The relative importance of intrinsic and extrinsic rewards as determinants of work. The Sociological Quarterly, 29, 365-385.

Mottaz, C. (1981). Some determinants of work alienation. The Sociological Quarterly, 22, 515-529.

Mumane, R., Singer, J., Willet, J., Kemple, J., & Olsen, R. (1991). Who will teach? Policies that matter. Cambridge, MA: Harvard University Press.

National Education Association. (1987). StatUs of the American public school teacher. Westhaven, CT: NEA professional library.

Pedhazur, E. J. (1982). Multiple regression in behavioral research. New York: Holt, Rinehart, and Winston.

Public School Forum of North Carolina. (1987). The condition of being a teacher. Raleigh, NC: Author.

Robinson, J. P., Athanasiou, R. & Head, 1969). Measures of occupational attitudes and occupational characteristics. Ann Arbor: Institute for Social Research, University of Michigan.

Ronen, S. & Sadan, S. (1984). Job attitude among different occupational status groups. Work and Occupations, 11, 77-97.

SAS Institute, Inc. (1987). SAS/STAT Guide. Cary, NC: Author.

Schneider, G. (1984). Teacher involvement in decision making: zones of acceptance, decision conditions and job satisfaction. Journal of Research and Development in Education, 18, 25-32.

Scott, K. & Taylor, G. (1985). An examination of conflicting findings on the relationship between job satisfaction and absentism: A meta-analysis. Academy of Management Journal 28 599-612.

Sergiovanni, T. (1966). Satisfaction and dissatisfaction of teachers: Final report. Report No. Br-5-8394. Urbana, Illinois: University of Illinois. (ED 0110089).

Smith, P., Kandall, L. & Hulin, L. (1969). The Measurement of Satisfaction in Work and Retirement. Chicago: Rand McNally.

Vroom, V. (1964). Work and motivation. New York: Wiley.

Wernimont, P. (1966). Intrinsic and extrinsic factors in job satisfaction. Journal of Applied Psychology, 50, 41-50.

Wise, A. (1989). Professional teaching: A new paradigm for the management of education. In T. Sergiovanni (Ed.), Schooling for Tomorrow (pp 302-310). Boston: Allyn and Bacon.

Yee, S. (1990). Careers in the classroom. New York: Teachers College Press.