MEASURING THE EFFECTIVENESS OF
A SELECTED MANAGEMENT
DEVELOPMENT PROGRAM

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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* * * * * *

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ACKNOWLEDGMENTS

This study was conducted while the writer was employed with the Nationwide Insurance Companies. The writer wishes to express his gratitude to the large number of people whose cooperation has made this study possible.

Appreciation is expressed to the many people at the Nationwide Insurance Companies who in some way or other contributed to the preparation of this paper. Particular appreciation must be given my superior, Mr. Walter T. Bradley, Director of Group Sales, who supported and encouraged the project in its entirety. Appreciation is also extended to the Office of Marketing, particularly Edmond Coughlin, Director of Marketing Manpower, and Jack Dick, Manager of Sales Management Development whose direct involvement and support made this study possible.

Appreciation is also very much extended to the Office of Research, particularly Dr. Darrell E. Roach, Director of Consumer and Corporate Research for his support in preparing and arranging the data for computerization. Particular gratitude is expressed to Mr. George Orth, Research Associate, whose assistance was invaluable in this study, and a nod of thanks must
go to Mr. Ronald K. King, Reports Analyst, who assisted in preparing data for computerization.

Acknowledgment is also due many persons at The Ohio State University. The writer expresses his appreciation to his adviser, Professor Reed M. Powell, Chairman of my committee, for his continual encouragement and instructive advice during the entire course of this effort. Appreciation is also tendered Professor David L. Bickelhaupt, who as a member of the dissertation committee, and as an expert in the field of insurance, offered much helpful advice and criticism. A debt of gratitude is also expressed to Dr. Ralph M. Stogdill of the Bureau of Business Research for giving unselfishly of his materials, counsel and encouragement and particularly for his patience in the instruction of research methodology.

A special thanks, too, is extended Mrs. Dorothy Stiverson for her vital aid in the preparation of this document.

Finally, it goes without saying that my wife and daughters deserve my profound gratitude for their patience and understanding during the development of this dissertation.
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# CONTENTS

## CHAPTER

<table>
<thead>
<tr>
<th>ACKNOWLEDGMENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iv</td>
</tr>
<tr>
<td>TABLES</td>
<td>ix</td>
</tr>
</tbody>
</table>

## CHAPTER

<table>
<thead>
<tr>
<th>INTRODUCTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature and Significance of the Problem</td>
<td>5</td>
</tr>
<tr>
<td>Scope and Objective of the Study</td>
<td>9</td>
</tr>
<tr>
<td>Methodology</td>
<td>11</td>
</tr>
<tr>
<td>Importance of the Study</td>
<td>15</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>18</td>
</tr>
<tr>
<td>Organization of Remainder of the</td>
<td>20</td>
</tr>
<tr>
<td>Dissertation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A REVIEW OF PREVIOUS RESEARCH ON MANAGEMENT DEVELOPMENT EVALUATION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Perspective</td>
<td>22</td>
</tr>
<tr>
<td>Negative Estimations of Evaluation</td>
<td>22</td>
</tr>
<tr>
<td>Positive Estimations of Evaluation Efforts</td>
<td>29</td>
</tr>
<tr>
<td>The International Harvester Study</td>
<td>34</td>
</tr>
<tr>
<td>University Executive Development Programs</td>
<td>41</td>
</tr>
<tr>
<td>Evaluation of Training Techniques</td>
<td>43</td>
</tr>
<tr>
<td>Evaluation of Sensitivity Training</td>
<td>45</td>
</tr>
<tr>
<td>Evaluation of the Managerial Grid</td>
<td>48</td>
</tr>
<tr>
<td>Approach</td>
<td></td>
</tr>
<tr>
<td>The Kepner-Tregoe Management Problem Solving and Decision Making Program</td>
<td>51</td>
</tr>
<tr>
<td>The Evaluation of Insurance Management Development Programs</td>
<td>53</td>
</tr>
<tr>
<td>The Evaluation Problem</td>
<td>58</td>
</tr>
</tbody>
</table>
### CONTENTS (continued)

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
</tr>
<tr>
<td><strong>A REVIEW OF THE RESEARCH ON THE OHIO STATE UNIVERSITY PERSONNEL RESEARCH BOARD LEADERSHIP STUDIES AND LEADERSHIP QUESTIONNAIRES</strong></td>
<td>62</td>
</tr>
<tr>
<td>The Leader Behavior Description Questionnaire</td>
<td>63</td>
</tr>
<tr>
<td>Definition of the Sub-scales</td>
<td>64</td>
</tr>
<tr>
<td>Scoring the Sub-scales</td>
<td>65</td>
</tr>
<tr>
<td>The Responsibility-Authority and Delegation Scales</td>
<td>66</td>
</tr>
<tr>
<td>Validity of the Scales</td>
<td>68</td>
</tr>
<tr>
<td>The Work Analysis Forms</td>
<td>68</td>
</tr>
<tr>
<td>IV</td>
<td></td>
</tr>
<tr>
<td><strong>A DESCRIPTION OF THE NATIONWIDE INSURANCE COMPANIES MANAGEMENT DEVELOPMENT PROGRAM</strong></td>
<td>72</td>
</tr>
<tr>
<td>The Program of Sales Management Development</td>
<td>74</td>
</tr>
<tr>
<td>Organizational Relationships</td>
<td>74</td>
</tr>
<tr>
<td>Marketing Objectives for 1966</td>
<td>76</td>
</tr>
<tr>
<td>Sales Management Development Programs</td>
<td>77</td>
</tr>
<tr>
<td>The District Sales Manager Program</td>
<td>77</td>
</tr>
<tr>
<td>The Basic School in Sales Management</td>
<td>78</td>
</tr>
<tr>
<td>V</td>
<td></td>
</tr>
<tr>
<td><strong>METHOD AND RESEARCH INSTRUMENTS</strong></td>
<td>85</td>
</tr>
<tr>
<td>The Pre-Training Phase</td>
<td>86</td>
</tr>
<tr>
<td>The Experimental Group</td>
<td>86</td>
</tr>
<tr>
<td>Mailing the Questionnaires</td>
<td>88</td>
</tr>
<tr>
<td>The Control Group</td>
<td>89</td>
</tr>
<tr>
<td>Selection of the Control Group</td>
<td>90</td>
</tr>
</tbody>
</table>
## CONTENTS (continued)

### CHAPTER V (continued)

<table>
<thead>
<tr>
<th>The Post-Training Phases</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim Period</td>
<td>91</td>
</tr>
<tr>
<td>First Post-Training Phase</td>
<td>92</td>
</tr>
<tr>
<td>Mailing the Questionnaires</td>
<td>92</td>
</tr>
<tr>
<td>Follow-up</td>
<td>92</td>
</tr>
<tr>
<td>Second Post-training Phase</td>
<td>93</td>
</tr>
<tr>
<td>Follow-up</td>
<td>94</td>
</tr>
</tbody>
</table>

| Quantitative Data        | 94   |
| District Production Data | 95   |
| District Sales Manager Volume Incentive | 96   |
| Recruiting Activity Data | 97   |

### CHAPTER VI

| The Research Instruments | 98   |
| The Leader Behavior Description Questionnaire | 98   |
| Purpose                  | 98   |
| Scoring                  | 98   |
| Use in This Study        | 99   |
| The Responsibility-Authority-Delegation Scales | 99   |
| Purpose                  | 99   |
| Use in This Study        | 99   |
| The Work Analysis Forms  | 100  |
| Summary of Methods Employed | 101  |

<table>
<thead>
<tr>
<th>THE EVALUATION PROCEDURE</th>
<th>103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumption of the Experimental Design</td>
<td>103</td>
</tr>
<tr>
<td>Explanation of the Null Hypothesis</td>
<td>105</td>
</tr>
<tr>
<td>Selection of Statistical Tests Nonparametric Tests</td>
<td>107</td>
</tr>
<tr>
<td>Kruskal-Wallis One Way Analysis</td>
<td>110</td>
</tr>
<tr>
<td>Friedman Two Way Analysis Explanation of Significant Difference</td>
<td>111</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>PAGE</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>VII QUANTITATIVE FINDINGS</td>
<td>112</td>
</tr>
<tr>
<td>The Research Experiments</td>
<td>112</td>
</tr>
<tr>
<td>Classification of the Data</td>
<td>113</td>
</tr>
<tr>
<td>Size and Composition of Samples</td>
<td>114</td>
</tr>
<tr>
<td>Analysis of Self Description Data</td>
<td>121</td>
</tr>
<tr>
<td>Analysis of the LBDQ Data</td>
<td>123</td>
</tr>
<tr>
<td>Analysis of the RAD Scale Data</td>
<td>131</td>
</tr>
<tr>
<td>Analysis of Kruskal-Wallis Test by Groups</td>
<td>137</td>
</tr>
<tr>
<td>Analysis of Kruskal-Wallis by Time Periods</td>
<td>141</td>
</tr>
<tr>
<td>Analysis of Friedman Test on the WAF</td>
<td>151</td>
</tr>
<tr>
<td>Analysis of Pearson Product-Moment Correlation Coefficients</td>
<td>158</td>
</tr>
<tr>
<td>VIII SUMMARY, RECOMMENDATIONS AND CONCLUSIONS</td>
<td>176</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>187</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>200</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>213</td>
</tr>
</tbody>
</table>
## TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summary of Questionnaires Distributed, Phase I</td>
<td>115</td>
</tr>
<tr>
<td>2. Summary of Questionnaires Distributed, Phase II</td>
<td>117</td>
</tr>
<tr>
<td>3. Self-Description Questionnaires of Managers, Phase I, Means and Standard Deviations</td>
<td>119</td>
</tr>
<tr>
<td>4. Self-Description Questionnaires of Managers, Phase II, Means and Standard Deviations</td>
<td>120</td>
</tr>
<tr>
<td>5. Self-Description Questionnaires of Superiors, Phase I, Means and Standard Deviations</td>
<td>122</td>
</tr>
<tr>
<td>6. Self-Description Questionnaires of Superiors, Phase II, Means and Standard Deviations</td>
<td>124</td>
</tr>
<tr>
<td>7. Leadership Behavior Description Questionnaire of Managers, Phase I, Means and Standard Deviations</td>
<td>125</td>
</tr>
<tr>
<td>8. Leadership Behavior Description Questionnaires of Superiors, Phase I, Means and Standard Deviations</td>
<td>127</td>
</tr>
<tr>
<td>9. Leadership Behavior Description Questionnaires of Managers, Phase II, Means and Standard Deviations</td>
<td>129</td>
</tr>
<tr>
<td>10. Leadership Behavior Description Questionnaires of Superiors, Phase II, Means and Standard Deviations</td>
<td>130</td>
</tr>
</tbody>
</table>
TABLES (continued)

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Responsibility-Authority-Delegation Scale, Phase I, Questionnaires of Managers, Means and Standard Deviations</td>
<td>132</td>
</tr>
<tr>
<td>12. Responsibility-Authority-Delegation Scale, Phase I, Questionnaires of Superiors, Means and Standard Deviations</td>
<td>133</td>
</tr>
<tr>
<td>13. Responsibility-Authority-Delegation Scale, Phase II, Questionnaires of Managers, Means and Standard Deviations</td>
<td>134</td>
</tr>
<tr>
<td>14. Responsibility-Authority-Delegation Scale, Phase II, Questionnaires of Superiors, Means and Standard Deviations</td>
<td>136</td>
</tr>
<tr>
<td>15. Recruiting Activity and Volume Incentive, Phase I, of Managers, Means and Standard Deviations</td>
<td>138</td>
</tr>
<tr>
<td>16. Recruiting Activity and Volume Incentive, Phase II, of Managers, Means and Standard Deviations</td>
<td>139</td>
</tr>
<tr>
<td>17. Kruskal-Wallis One-Way Analysis in Group Comparisons, Phase I</td>
<td>140</td>
</tr>
<tr>
<td>18. Kruskal-Wallis One-Way Analysis in Group Comparisons, Phase II</td>
<td>145</td>
</tr>
<tr>
<td>19. Kruskal-Wallis One-Way Analysis by Time Periods, Phase I and II</td>
<td>149</td>
</tr>
<tr>
<td>20. Friedman Two-Way Analysis of Variance by Ranks, Phase I and II</td>
<td>153</td>
</tr>
<tr>
<td>21. Pearson-Product Moment Correlational Matrix of Twenty-seven Variables, Phase I, Time Period 1</td>
<td>159</td>
</tr>
<tr>
<td>TABLE</td>
<td>PAGE</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>22. Pearson-Product Moment Correlational Matrix of Twenty-seven Variables, Phase I, Time Period 2</td>
<td>161</td>
</tr>
<tr>
<td>23. Pearson-Product Moment Correlational Matrix of Twenty-seven Variables, Phase I, Time Period 3</td>
<td>162</td>
</tr>
<tr>
<td>24. Pearson-Product Moment Correlational Matrix of Twenty-seven Variables, Phase II, Time Period 4</td>
<td>163</td>
</tr>
<tr>
<td>25. Pearson-Product Moment Correlational Matrix of Twenty-seven Variables, Phase II, Time Period 5</td>
<td>165</td>
</tr>
<tr>
<td>27. Composite Premium Index, Mean and Standard Deviation by Time Periods, Phases I and II</td>
<td>173</td>
</tr>
<tr>
<td>28. Composite Premium Index, &quot;T&quot; Test Scores Differences Between Uncorrelated Means Phases I and II</td>
<td>174</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Beginning with the early post World War II days, some highly significant changes have taken place in the field of management. Lawrence A. Appley, President of the American Management Association, referred\(^1\) to this trend as the "managerial renaissance"—a reawakening of management and with it the awareness to search for and develop managerial talent.

Companies focused, and are still focusing, efforts—consciously and methodically—on the development of management staffs. The trend continues today to the point where corporate management development staffs, academic institutions, professional associations, and management consultants are hard pressed to keep pace with the insistent and enlarging demands for assistance in this area of activity.

Certain basic factors seem to underline the need for and the interest in the development of the manager. Of many factors, several stand out. First of all, the management job

has become increasingly complex in terms of both the kinds of activities and the volume of work. Its range of responsibilities is broader and it is subject to growing external influences and pressures. The management job has become more precise and more exacting because of the profound impact of managerial duties and responsibilities in an environment of technological change.

Secondly, it has become recognized that management is an activity which requires specific qualifications and preparation. Management which embodies elements of a profession, a science, and an art, demands perquisite skills and facilities.

Another reason for the focus on management development is the need for maximum development and utilization of the present management manpower. Currently the supply and availability of qualified executives are seriously limited. Present population tables genuinely reveal the thinness of the 35-44 executive age group.²

Still another factor impelling management development has been the advancing educational level of the post-war manager who has recognized the need for management knowledges and skills. As DePhillips, Berliner and Cribbin

point out, "the growth of industry and the shortage of skilled supervisory, technical and management employees made formal training programs a matter of necessity for the business firms that desired to grow as rapidly as they could."

This concern for management development is just as evident in the insurance field as in manufacturing. The need for qualified management was aptly expressed by Huey who stated:

The next few years will place a premium on the need for a well trained management staff at all levels; that the essence of management is delegation... no matter how competent and able the man at the top may be, he is restrained from the effective performance of his job if there is not competence and ability at all levels working with him. The job of providing this competence and ability--regularly... adequately... economically... intelligently--is the job of management development in life insurance and in all business... The number one job of the agency officer is, therefore, to find and build good managers... The critical nature of this job has been accentuated by many influences:

- by the continuing growth of life insurance
- by the growth of new companies
- by the carving up of once large agencies into smaller agencies
- by the post-war shifts in population distribution
- by the increasing competition for all manpower from other industries

- by the increasing new competition for the savings dollar by other vigorous institutional programs. 4

Today hundreds of millions of dollars are spent to develop management talent through management development activities. These activities, depending on the size of the organization and the availability of funds, will range from the formal and comprehensive to the informal and simple.

A detailed definition and description of the many formal management development techniques is not within the scope of this study. Instead, this study will concern itself with one management development technique, the formal management development seminar or conference type program.

The formal management development seminar has been the subject of much research study. Although there is continuing effort to determine its effectiveness, much still remains to be learned. In fact, there is much diverse opinion as to the effectiveness of the conference type activity. And to compound this problem, this diverse opinion is substantiated by a paucity of measures that concretely and objectively determine the influence of this particular management development activity.

It is hoped that this research effort will make a contribution by determining the effects, if any, of a management development seminar upon the managerial behavior of its participants.

This research effort is concerned with a particular group of managers involved in a specific and formal field sales management development program for district sales managers.

Nature and Significance of the Problem

In order to achieve maximum value from management development programs there should be definitive measurement of the program's effectiveness. Although evaluation of management development activities is alluded to as being most desirable, there is little evidence of serious effort in this activity.

Emphasizing the need for continuing research in determining the effectiveness of management training, Hutchinson exhorted the life insurance industry to "research in depth the total problem of what has to be done to improve the industry's batting average of providing better managers. When you have a topflight manager, all other problems--recruiting, compensation, persistency, premium growth--seem to disappear."\(^5\)

The absence of evaluation may be due, as Wallace and Twitchell believe, "to management's reluctance to 'waste time' in testing something it has convinced itself is good. Training programs are uniformly excellent--by expert opinion and proclamation."⁶ At any rate, writes Anshen, the problem of how to evaluate executive development programs, both university-sponsored and company-sponsored, in terms of what they do for the men who attend them, remains to be solved.⁷ And the citations of these writers are reinforced by Jucius in his recently revised text when he maintains that follow-up and evaluation of executive training programs are particularly difficult because it is almost impossible to determine which results of executive efforts are attributable to training and which to other causes.⁸

McGehee and Thayer point out that there is little evidence of serious effort in evaluation and these researchers also corroborate that little experimental evidence is available.

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that developmental programs such as the seminar or conference-type produce improvement.\(^9\\)

However, where management accepts management development and its activities as a necessary tool in the efficient operation of the business, the question of evaluation must be given serious consideration and action. For it is from careful and critical evaluation that management will be able to get the answers to the following questions:

1. Are management development programs producing the results needed by the organization?

2. What improvements can be made in developmental activities which will result in greater returns on the dollars invested?

3. Are management development programs to improve organizational effectiveness or should the money spent on development be used in some other kind of activity which will contribute more effectively to the attainment of organizational goals?\(^10\\)

Admittedly, cite McGehee and Thayer, the evaluation of training is not a simple problem since we are dealing with measuring human behavior or the results of human behavior.\(^11\\)

Thus, a significant kind of measurement would be one that would identify or relate changes or modifications that occur in


\(^10\)Ibid.

\(^11\)Ibid.
the managerial behavior of the participants in the management development activity. Another measurement of the effectiveness of management development conference-type programs would be one that demonstrably relates the management development activity to the achievement of the organizational goals.

At The Ohio State University, Leadership Studies conducted by Dr. Ralph Stogdill and other members of The Ohio State University Leadership Studies program have resulted in, among other things, the development of a set of questionnaires for test and retest measurements of executive behavior. These Leadership Study questionnaires were designed to describe objectively the behavior of persons in leadership positions and have been employed in a number of governmental, military, and business studies. As yet, these Leadership Studies have not been applied in the insurance business. Consequently, since the focus of this study is a selected executive development program within the insurance field, an additional purpose of this present study is to apply the Leadership Studies questionnaires to an additional area of executive leadership.

As indicated, the area of study is the insurance business. More specifically, the object of research concerned a group of District Sales Managers of the Nationwide Insurance
Companies. These managers participated in a management development seminar coordinated by Nationwide's Department of Marketing Manpower within the Office of Marketing. The seminar under study was purposefully constructed to develop the manager in his functional responsibilities of field sales management. In many respects, the problems of the field sales manager are more complex, and the responsibilities more arduous than those of the home office based manager.

In summary, it is hoped that this research effort will make a contribution in current research on the measurement of the effectiveness of a selected management development program. Secondly, that it will contribute to the knowledge of management development for the field sales manager. It is hoped that this research effort will make a contribution by applying and appraising the application of the Leadership Studies questionnaires in an additional field of leadership. Finally, it is recognized that this study will not solve the problem of executive development evaluation but may assist in developing an approach for successful evaluation.

Scope and Objective of the Study

This study will concern itself with a management development seminar that historically has been known as the
Basic School in Sales Management for District Sales Managers. Since 1956, the Office of Sales (now the Office of Marketing) of the Nationwide Insurance Companies has conducted this seminar in Columbus, Ohio. Approximately 400 District Sales Managers have completed this comprehensive week-long developmental program since its formalization in the middle fifties.

The program to be studied is a week-long management development seminar. Emphasis in this seminar is on the orientation to and instruction in the fundamental managerial and functional responsibilities of the District Sales Manager. The group studies was composed of recently appointed District Sales Managers.

With recognition that there is a need to measure the effectiveness of management development programs and specifically those of the insurance field and that there is a need to identify significant changes, if any, in the managerial and behavioral performance of the executive as a result of participation in the program, it is (null) hypothesized that:

1. The immediate manager of the participating executive will not observe a significant change in his leadership behavior.

2. The immediate manager of the participating executive will perceive no significant change in the pattern of managerial functions exhibited by the executive.
3. The executive himself will perceive no significant change in the exercise of major functional responsibilities than before participation in the executive development program.

4. The executive himself will perceive no significant change in his leadership behavior.

5. The subordinates of the executive will exhibit no significant change in such indices as sales call activity, production and income as a result of the executive's participation in a management development activity.

Since the Nationwide Insurance Companies have been singularly active in management development activities, no difficulty arose in securing permission to conduct this study of the selected program. A proposal was submitted to top-level personnel within the Office of Marketing who readily offered their facilities, cooperation and assistance in the conduct of this independent study which utilized qualified methods of scientific research.

**Methodology**

The experimental group in this study is comprised of two different groups of District Sales Managers who attended and completed the management development seminar. Each manager in the experimental group completed a set of Leadership Studies questionnaires before the program and completed
an additional set of questionnaires at 4 and 12 week intervals after the program.

Simultaneously, a control group comprised of managers not attending the management development program completed the questionnaires at similar intervals. The intention was to compare the results of these sets of questionnaires with the results of identical questionnaires completed by the control group.

Additionally, a set of questionnaires was completed by the immediate superior (the Regional Sales Manager) of each District Sales Manager in both the experimental and control groups. The questionnaires were completed concurrently with those of the participants in the program, i.e., before the management development seminar and at succeeding intervals of four and twelve weeks after the conclusion of the program.

The District Sales Managers who comprised the population of this study were drawn from widely scattered areas within the operating territories of the Nationwide Insurance Companies. The territories represented in this study are in the eastern half of the United States with Illinois as the farthest western state. The other states represented here are in a line from Indiana to Michigan, New York to Massachusetts, Connecticut, south along the eastern seaboard to
Virginia, Florida and Alabama with Ohio, Pennsylvania and West Virginia in between. The representative districts were located in generally well established sales regions and are considered to be normal, representative districts without significant variance as to either population or business concentration.

The following Ohio State Leadership Studies questionnaires were administered to the Regional Sales Managers and the District Sales Managers of both the experimental and control groups:

1. Leader Behavior Description Questionnaire (Ralph M. Stogdill, The Ohio State University)

2. Responsibility - Authority and Delegation Scales (Ralph M. Stogdill, The Ohio State University)

3. Work Analysis Form for Management Positions (Ralph M. Stogdill and Carroll L. Shartle, The Ohio State University)

Coincidentally with the completion of the questionnaires and at the corresponding time intervals, the subordinates (insurance agents) of the District Sales Managers in both the experimental and control groups were measured for significant differences in the levels of sales call activity, production and income. The District Sales Managers themselves were measured for significant differences, if any, in their levels of commissions during the period under study.
Once collected, the data were scored and relationships were determined between the pre-test and post-test scores of the three questionnaires administered to the District Sales Managers and the Regional Sales Managers in both the experimental and control groups. The means and standard deviations were computed for the three forms. Additionally, the means and standard deviations were computed for measuring differences in the variables of call activity, production and income of the subordinates (agents) of both the experimental and control groups.

Furthermore, as a means of testing the hypothesis, the Kruskal-Wallace test was applied to the LBDQ (Leadership Behavior Description Form), the RAD Scale (Responsibility, Authority and Delegation Scale), and to the data of the Biographical Sketch.\(^{12}\) In addition, the Friedman test was applied to the ranks of the WAF Form (Work Analysis Form) to test the distribution of internal ranks.\(^{13}\) These tests were applied to both the pre-test and post-test scores.


Importance of the Study

There are several considerations that indicate the need for a more quantifiable evaluation of management development programs. These considerations are equally applicable to industry at large as well as to the insurance business.

The first consideration is this. There is a real need to determine quantitatively the effects of management development programs upon the participating managers. Much more effort in this direction must be conducted.

Recently, Wallace pointed out, "it is sad but true, that like other businesses, we (in the insurance business) know much less about the ways in which we recruit and develop managers than we do about agents. Indeed it is only recently that we have begun to realize that managers are not just good salesmen with a new title, a new method of compensation and have experience with another company."14

Coincidentally, an accurate appraisal of the influence of developmental activities should help strengthen the exclusive agency system of the insurance industry which depends heavily upon efficient management for financially profitable results. In fact, one of the main advantages of the exclusive

agency system is lower cost through reduced commissions or decreased expenses because of centralization of some functions as policy writing, records keeping, billing, training, advertising, and sales methods.\textsuperscript{15}

A second consideration bears upon the first. Today more than ever there is an urgent need for management personnel who are qualifiedly trained. A high degree of turnover among the insurance management ranks for instance, is a persistent phenomenon of corporate life. On the average, cites Wallace, the industry expects to lose between 5 to 12 percent of its managers each year. This sounds small compared to its agent turnover rate, but it looms large in respect to the relative difficulty of replacement in a highly competitive labor market. Furthermore, 20 percent of the managers lost annually in the insurance industry represent inevitable losses by retirements, disabilities, or deaths. Sixty percent are lost before they have given their companies five years of service.\textsuperscript{16}

A third important consideration is the overall cost of developing managers and more specifically, the direct costs of conducting management development seminars. For example,


the estimated average cost of one participant in a Nationwide Office of Marketing sponsored week-long seminar is approximately $250. The total cost of attending an industry sponsored seminar such as those conducted by the Life Insurance Agency Management Association will range between $400 and $500. These figures multiplied by the several hundred insurance managers participating in these seminars amount to extensive expenditures for just the conference type program alone, irrespective of the many other developmental type activities occurring within the organization.

A final consideration concerns itself with the need for, and the researcher's desire to conduct continuing research and analysis in the application of The Ohio State University Personnel Research Board Leadership Studies and Leadership questionnaires.

In summary, it is hoped that this study will add to the body of existing knowledge of developmental evaluation by more quantitatively measuring the influence of the seminar type program upon the manager and his subordinate and by so doing, permit alteration and modification of existing program content wherever required for better managerial preparation. Concurrently programs constructed to influence behavior more directly should result in managers who are more quickly
successful in the insurance field. And, to be sure, the return on investment in management development should offer a quicker return in profitable results through successful sales efforts of effectively managed agents.

**Limitations of the Study**

There are certain limitations involved in a study of this kind. First of all, all respondents in this survey, of necessity, were identified. The superiors and their reporting managers required identification to insure proper matching of the superiors and managers. Of course, it is not known what effect this identification would have upon the structuring of replies by the respondents. However, it must be emphasized that repeatedly in all phases of this program, the researcher stressed the independent nature of the study, its anonymity, and its disassociation with any particular function of Nationwide. Stressed were the facts that respondents would be assigned numerical codes upon completion of the first series of questionnaires and that the only information to be supplied the company would pertain to the specific and general conclusions of the analysis. The impartiality of the researcher was strengthened through frequent telephone and personal conversations which stressed the independent nature of the study.
The researcher feels this limitation exercised little, if any, influence in view of the excellent cooperation received from all the respondents.

The second limitation in this study concerns itself with the possible "Hawthorne effect" of the District Sales Managers in the experimental group. Since the District Sales Managers in the study were relatively new in a managerial position, there was the possibility that responses would be structured in order to support the objectives of the sales seminar under study. Again this possibility is rejected because of the multiplicity of quantifiable variables in the study which ipso facto express positive, neutral or negative change.

The third limitation in this study concerns the problems of communication in a study where, except for the initial pre-test to the District Sales Managers in the experimental group, the questionnaires are administered by mail. However, to promote communication and to clarify directions, written cover letters accompanied all questionnaires. Additionally, certain problems in questionnaire completion were resolved through subsequent memos and phone conversations. In this respect, the researcher enjoyed a distinct advantage by being personally acquainted with many of the respondents in this study. This acquaintanceship, in his opinion, helped foster rapport,
cooperation, and objectivity, in questionnaire completion. Fortunately, the researcher was allowed ample freedom to communicate with the respondents in order to expedite completion of tardy cases, to clarify instructions, and to answer questions personally and thoroughly.

A fourth limitation exists in the possibility of subjective bias in questionnaire completion particularly where the questionnaire required critical self-evaluation of managerial behavior.

In summary, although the limitations expressed were evident in this study, it is the researcher's opinion that they were nevertheless mollified to a non-influential degree.

Organization of Remainder of the Study

The following chapter develops a review of previous research on management development evaluation. Chapter III treats the literature on The Ohio State University Personnel Research Board Leadership Studies and the Leadership Studies and the Leadership Questionnaires used in this study.

Chapter IV discusses and describes the selected management development program for study and analysis. It treats the Nationwide Insurance Companies' management
development program for District Sales Managers. It elaborates upon the objectives, content and administration of the program.

Chapter V presents the methodology of the study. The nature of the sampling procedure, the testing instruments and appropriateness of the statistical tests are discussed.

Chapter VI analyzes the data in the study. In this chapter there is an indication of the problems encountered in the conduct of this study.

Chapter VII displays the results of the study and presents an analysis of the findings in the light of the hypotheses.

Chapter VIII summarizes the findings of the study and presents some conclusions and recommendations as they relate to the hypotheses.
Chapter II
A REVIEW OF PREVIOUS RESEARCH ON MANAGEMENT DEVELOPMENT EVALUATION

Chapter Perspective

In this chapter, a review of the empirical research which has been relevant to management development evaluation will be discussed. The implications of previous research will be referenced to the hypotheses of this study.

Negative Estimations of Evaluation Efforts

In discussing management development programs in industry, Houston (1961) writes that among the many opportunities for greater effectiveness in management development, one major concern is the need for more effective measurement of the results of the developmental effort. He cites the need for measuring the change in the individual—in his attitudes, his relations with others, the quality of his thinking, his decisions, his planning and organizing and the general

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effectiveness of his work. Houston recognizes the concern should be more of how he uses what he has gained from the developmental experience than with just what new knowledge and understanding he has acquired. He also recognizes the extreme difficulty of measurement since he feels precise instruments have not been developed and more research is necessary.

A pessimistic view of training evaluation is taken by Strauss and Sayles (1960), who contend that convincing proof, objective and demonstrable, is difficult to obtain in the training field. The truth is, they write, that we have no real proof that training of any sort is effective. More research is necessary.2

Wallace and Twichell (1953) contend that little experimental evidence is available on the relative merits of different training procedures or that "training as it is being carried out in specific situations produces any improvement in workers' performance at all."3


Korb (1956) relates that a review of the literature on the evaluations of training and a study of the evaluation provisions contained in a large number of supervisory development programs indicate that little actually has been done to measure supervisory training in terms of its effect upon the productive efficiency and morale of an organization.4

Shartle (1956) reports that "the evaluation of training at the executive level presents many difficulties. Changes in performance during or following training may be caused by something else. And while several executives may report that the training made a difference, the evidence may not support it."4

Jucius (1963) contends that follow-up and evaluation of executive training programs are particularly difficult because it is almost impossible to determine which results are attributable to training and which to other causes. However, he concludes it is desirable to make an attempt to evaluate because a partial answer is better than none.6

House has performed exhaustive study on the effect of management development programs. He writes, "if enthusiasm and money could insure success, management development programs should be turning out managers enough for all industries. Yet the evidence is to the contrary. I have analyzed the results of 400 experimental studies concerned with management development and found much disappointment and disillusionment. In many cases, these programs have had little or no demonstrable or measurable effect on business performance or managerial behavior."\(^7\)

Beach (1965), on the other hand, feels training can be evaluated and recognizes that the most refined method for evaluating training is to measure performance before and after training for both a control group and an experimental group. However, he feels that although it is one of the most fruitful methods available such a rigorous experimental approach to training is seldom carried out.\(^8\)

In a discussion of the relationship of research to training, DePhillips, Berliner and Cribbins (1960) are more optimistic and contend that the application of research techniques


will improve the efficiency of training. "It is evident that the most fundamental purpose of research in training is to assist in a critical and analytical manner by finding the facts and principles that will facilitate the processes of changing human behavior."\(^9\)

Proctor and Thornton (1961) reaffirm the need for systematic evaluation and maintain it is both practical and necessary. However, they caution that "if we expect immediate evidence in dollars of the success or failure of training effort -- if we expect absolute proof -- we will be disappointed. The amount and direction of learning and on-the-job effects of training are more difficult to measure in training efforts directed, for example, toward improving decision making, toward increasing personal effectiveness, or changing attitudes than they are in skills training."\(^10\)

Allen (1957) writes that there are two main reasons why management development programs so often fall short. The first is the failure to identify from the beginning what a manager must do in managing. The second failure is the assumption that managers can be trained to manage away from the job. "While


courses, seminars and conferences are an indispensable part of the training process, the most they can accomplish is to fill gaps in knowledge and provide a certain amount of practice in management technique." \(^{11}\)

Some management experts do not discuss the problem of evaluating training and development. Davis (1962), for example, spends two full chapters and 35 pages on Human Relations Training and Simulation Training (Role Playing) without mentioning evaluation of training results. \(^{12}\) This is no criticism of Davis, but just a comment on the illusiveness of a necessary element in the discussion of management development.

Since this study concerns that of the field sales manager, the researcher sought specifically for relevant contemporary studies in this area. Little is to be found. Again, many authors simply ignore the problem of training evaluation. Stanton and Buskirk (1964) offer nothing on sales training evaluation. \(^{13}\) Neither does Haas (1957) in a 300 page text on developing


successful salesmen. Scott, Clothier and Spriegel (1961) fail to mention evaluation in their text.

However, one recent interesting research report was that of Vizza (1965) who studied the training and development of the field sales manager. Actually, this appears to be one of the few studies in this field. In a chapter on "Implementing and Evaluating the Program," Vizza concludes that "evaluation of training programs was found to be one of the greatest weaknesses in this area." Vizza avows that evaluation is necessary to justify the program; to improve the program; and to measure the program against its objectives. He offers as evaluation techniques:

1. Turnover ratios of field sales managers (he cautions the injection of variables into this factor)

2. Turnover ratios of salesmen

3. Number of unfilled field manager positions

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4. Number of promotions

5. Quantifiable performance appraisal in terms of sales volume, expenses and profit standards.

Vizza feels that "the difficulties involved in measuring the effectiveness of a training program are analogous to those involved in measuring the effectiveness of advertising. Training is but one of the many factors that affect the performance of a manager, as advertising is but one of the many factors that affect sales."\(^{17}\) In this researcher's view this statement would seem to imply the inevitability of non-quantifiable results from sales management development programs.

**Positive Estimations of Evaluation Efforts**

Buchanan (1957) found positive results in a study to determine the effectiveness of a supervisory development project which would be valid and applicable in an industrial setting. The project was designed with two major ends in view: (1) to apply findings from relevant social science research to the improvement of operations; and (2) to develop and apply a method of evaluating the results of supervisory training. Buchanan recognized the importance of before and after measurements on both experimental and control groups. However, the study did not permit this technique. Essentially, evaluation consisted of

\(^{17}\text{Ibid., p. 121.}\)
asking the superior and subordinates of each participant, two months after the workshop, to return a questionnaire reporting specific behavior which represented a change in job performance attributable to the training.\(^{18}\)

Buchanan concluded that with two workshop groups of 75 and 79 members, the following results were produced. As evidence of the validity of the evaluation system, the changes in job behavior which were reported for participants were consistent with the goals of the workshop and with the learning reported by the participants themselves. As evidence of the effectiveness of the training program two-thirds of the participants were observed to have modified their job performance.

Hillman (1962) developed positive results in evaluating three management development programs for a total of 600 supervisors. The objectives of the program were to reduce turnover, reduce Workmen's Compensation claims, reduce absenteeism, improve safety, improve morale and retard the growth of union representation. The subjects covered in the program concerned management's responsibilities of planning, organizing, controlling, selection of employees, motivation,

methods improvement and handling personnel problems. Utilizing
the Remmers "How Supervise" form for only an experimental
group, Hillman found that during the first year following the pro-
gram, "turnover was 30% below the prior five year average, fre-
quency and severity of accidents down 50% over the prior five
year average, and Workmen's Compensation costs were 'sub-
stantially lower.'" Hillman suggests that these results may have
been attained without the training program since it is impossible
to isolate the reasons for improved operations. 19

Moffie, Calhoon and O'Brien (1964) showed positive
results in an experimental study to evaluate a training course
in problem solving and decision making. The course was a
24-hour program to increase speed and accuracy of problem
solving and decision making by the course participants. The
results indicated that the trainees and company management
viewed the training successful, irrespective that whatever losses
and gains occurred in the experimental and control groups were
not statistically significant. A controlled experiment was set up
to determine the extent to which the course objective was
achieved. The criteria used to measure achievement were the

19Harry H. Hillman, "Measuring Management Training--
A Case Study," Journal of the American Society of Training
ability to think critically and the ability to ascertain the proper
cause and corrective action required when presented with a
problem situation. The Watson-Glaser Critical Thinking Appraisal
Test was used.\footnote{Dannie J. Moffie, Richard Calhoon, and James K.
O'Brien, "Evaluation of a Management Development Program,"
Personnel Psychology, Vol. 17, No. 4 (1964).}

Goodacre (1957), in a much quoted study conducted at
the B. F. Goodrich company stressed the importance of objec-
tive rather than subjective evaluation. He employed experimental
evaluation with 800 persons eligible for management training.
Utilizing both the experimental group and control group, Good-
acre administered various criteria to both groups before and
after training. The program objectives consisted of a change
in attitudes, job satisfaction, self confidence, knowledge of
human relations, decision making, selection and training of
employees. These criteria were developed to meet the three
tests (according to Goodacre) of statistical utility, relevance
and reliability. In comparing the two groups, \( t \) tests were
computed to measure the significance of the differences between
them. On this computation no significant measurable improve-
ment in the attitudes or job performance of the trained group
was found. Significant improvement was found, however, in
self confidence, knowledge of training and selecting employees,
and decision making. Goodacre concluded that on the basis of his experience, an experimental evaluation of management training which satisfies the conditions of adequate criteria, statistical analyses and built-in design will provide management with the facts on whether their program objectives are being realized.21

In discussing whether management training is worthwhile, Savitt (1957), over a year and a half span, studied four groups of supervisors and executives who participated in management training programs. The sample comprised 37 persons in the middle management level of a government organization. Savitt administered a questionnaire on management principles and practices at the onset of the ten week program, then administered the same questionnaire at its conclusion. He ascertained that persons with previous management training scored significantly higher than those without it, and while intelligence counted too, training itself may be as significant as intelligence in determining performance.22

Savitt's study employed no control group and measured knowledge acquired rather than the effects of the program upon managerial performance.


The International Harvester Study

Perhaps one of the most noteworthy efforts in management development is that of Fleishman, Harris and Burtt (1955). This widely quoted research effort was supported by the International Harvester Company and administered through the Personnel Research Board of The Ohio State University. This study is fully described in a monograph published by The Ohio State University. This researcher found this study most interesting because of certain paralleling similarities to those in his own research effort.

The setting for research was one of the motor-truck manufacturing plants of the International Harvester Company. The plant employed approximately 5,005, of whom about 300 are classified as supervisors.

This company sponsored a central school for supervisors in conjunction with the University of Chicago and specifically for the broader development of the supervisor. Of two weeks duration, typical courses taught in the central school included labor relations, planning and organizing, logical thinking, economics, public speaking, human behavior and how to build a team.

Major consideration was given human relations and special

emphasis was put upon supervisory problems. Instructional techniques ranged from the extensive use of visual aids to textbook materials and from role playing and group discussion to conventional lectures. Student participation was encouraged. The instructional staff consisted of university personnel and company training specialists. Little systematic evaluation occurred.

The research involved three principal phases. The first pertained to learning which areas of supervisory leadership were important, along with developing reliable instruments for measuring these areas. The second phase used these instruments to determine what happened to a supervisor's attitude as a result of leadership training at a special school, and importantly, the nature of those attitudes and of his supervisory behavior when he returned to his plant. (Similar questionnaires were given to the supervisor's superiors and subordinates to determine: (1) the leadership climate within which the supervisor worked; and (2) the ways in which others perceived his behavior as a result of the training course.) The third phase related the different types of leadership to employee morale, general department efficiency, absenteeism, grievances and turnover.
As indicated in the preceding paragraph, Phase I concerned itself with the development of the leadership behavior factors of "consideration" and "initiating structure." The testing instrument was developed after considerable and sophisticated treatment.

The research team found, as expected, a general increase in consideration attitudes immediately following the training course. On the other hand, initiating structure attitudes decreased.

However, from questionnaire data it appeared that from two to ten months after the training, the trained supervisors ranked lower on consideration behavior and attitudes than did non-trained supervisors. In studying the apparent reversal, the researchers administered the questionnaires to each supervisor's superior in management. Results showed that supervisors who operated under high consideration leaders tended to rank themselves higher in consideration attitudes and behavior. The same was true for initiating structure. In effect, the results suggested that supervisors were more responsive to their day-to-day relations with superiors than to a special training course with other supervisors.

The research team also measured the effects of training on leadership adequacy as seen by subordinates. The results indicated that employees liked working the most under trained
supervisors who had returned from the course to a leadership climate high in consideration. Worker morale was highest under supervisors who ranked high in consideration.

Finally, the research team found that absenteeism and grievances were higher in groups whose supervisors were high in initiation of structure, lower in groups with consideration supervisors. At the same time, proficiency ratings by management in production divisions tended to be higher for supervisors high in initiation of structure. Consequently, the production supervisor whose employees were high in morale, low in absenteeism and with few grievances tended to be less proficient in management's estimation.

As Fleishman, Harris and Burtt point out, "the human relations training is wasted, to a considerable extent, unless the environment in the plant is also strong in human relations." 24

House (1960) performed an evaluation study of a seven session, fourteen hour communications training program for engineering management. 25 House developed quantitative data on the effects of a follow-up program to a conventional program.

24 Ibid., p. 94.

through the use of questionnaires completed by the subordinates of the participants of the training program. By comparing the change which took place on the part of the control group with the change of the experimental group it was possible to determine the effects of a follow-up program designed to integrate classroom teaching with on-the-job performance. As a result of his findings, House concluded there were negative effects of the follow-up program. He further concluded that while the experimental group was in effect trained during the program, this training in communication was in conflict with the existing climate established from the top of the organization. Consequently when the training took effect it came into conflict with existing management practices.

This conclusion, House cites, is consistent with the negative effects found in the International Harvester experiment that the effects of training are conditioned by the behavior of the members of management many organizational levels above the levels at which the training took place.26

Stroud (1959) employed the consideration scale of the LBDQ of The Ohio State University Leadership Studies along with a Critical Incident section with two groups of supervisors in a human relations training program at the Bell Telephone

26 Ibid., p. 142.
Company of Pennsylvania. Stroud substantiated that it was necessary to use a measure other than the trainee's opinion and that the study appeared to furnish an effective measure of performance change in the human relations areas covered in the program. However, she also concluded the need for more precise methods of evaluating the effectiveness of human relations programs. 27

Carron (1964) concluded that virtually all published material on the evaluation of supervisory training has appeared in the last ten years. Carron (1962) wrote that only six studies had employed rigorous experimental designs using before and after measurements on matched or randomized experimental or control groups, using criteria other than ability to recite supervisory principles. Carron (1964), in an attempt to evaluate human relations training in terms of changed attitudes, made attitude measurements on both experimental and control groups at three different times—before training, immediately after training, six months later; and a follow-up, 17 months after the end of training. He used Fleishman's LOQ and Adorno's F Scale for the attitude measure. In what is considered a novel application, he used Vector Analyses to analyze

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the structure and consideration dimensions of Fleishman's LOQ. This demonstrated a statistically significant change from authoritarian to democratic attitudes in the experimental group.28

One final individual research effort should be cited before discussing the university executive development programs. This is the study of Albanese (1962) in which he analyzed the effectiveness of an executive development program in the restaurant industry.29 He employed as research instruments, the earlier version of the LBDQ (40 items), the Leader Behavior Self Description form, the RAD Scales, the Work Analysis form and the Work Group Descriptions form.

In an effort to determine the development program's influence upon managerial behavior, Albanese concludes that from the evidence provided by the research design used in his study, the development program studied could not be related to any significant change in the leadership behavior of the managers that participated in the program.30 The program for study was a five-day executive development program that encompassed lectures and discussions in the principles and functions of management, human relations and leadership.


30Ibid., p. 84.
However, as Albanese indicated, the inability to demonstrate a hypothesis does not prove it is incorrect. Such a hypothesis might have been demonstrated with a larger sample than the 16 members of the experimental group and the 6 members of the control group.

University Executive Development Programs

In regard to evaluation of university type management development, Anshen, while supporting and endorsing the university development program, concludes that the problem of how to evaluate executive development programs both university and industry sponsored remains to be solved. The only appraisal techniques applied so far (1954) have been the familiar ones of formal and informal querying of participants and maintaining a sensitive post for feed-back indications. Anshen writes that we have too little knowledge of what the university programs accomplish.

On the other hand, and more positively constructed, Powell (1964), in a most penetrating study, found that in general the various university programs had a most favorable impact upon the participants. Powell, however, concludes with

31 Ibid., p. 84.
a reminder that the focal point of any evaluation of the role and
contribution of executive programs is the exploration of the basis
of the course curriculum. Such an inquiry, he feels, "probes
the relationship of the type of curriculum with the values which
executives report reviewing from the program experience."33

Powell (1962) in another study of executive development
programs on the campus reported in a post program questionnaire
survey of more than 6,000 executives, that as a result of the
university program they are more favorable to additional expo­
sure to this type program. Additionally, a large majority
evidenced dramatic growth in salary responsibility and position
following their return to the firm.34 In fact, Powell writes,
that of the 6,000 respondents to mail questionnaires, 86.8 per­
cent of the reactions to the program were positive, this fact
was reaffirmed by 93.6 percent of those in a personal inter­
view who expressed initial positive reactions.35

33Reed M. Powell, "Manager's Needs and University
Executive Development," Reprinted from The Academy of Man­
agement Proceedings of the Annual Meeting, December, 1962,
p. 3.

34Reed M. Powell, "The Role and Impact of the Part­
time University Program in Executive Education," Division of
Research, Graduate School of Business, UCLA, 1962, p. 59.

35Reed M. Powell, "Business Looks at Executive
Development Programs," Reprinted from Business Topics,
Michigan State University, Autumn, 1962.
Lawshe, Bolda and Brune (1959) undertook a series of studies to evaluate role playing as a technique in management human relations training. Five studies were conducted to evaluate the effects of single and repeated exposures to the skit-completion method of role playing. Evaluation criteria consisted of scaled responses to a standard human relations training case in two dimensions: Sensitivity and Employee Orientation. Criterion responses were obtained before and after role playing in four subject groups. It was found that changes in criterion case responses were effected in only those instances where impact occurred in connection with the training experience.

"Impact" is used to describe a characteristic of a training experience which allows the trainee to criticize his own human relations performance, provides feedback and emphasizes a particular human relations factor in a strong emotional manner.36

House (1964) in discussing role playing as a method of management development points out that there is little experimental evidence to demonstrate that this performance can be transferred to actual job situations. He further cites that a

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a review of the research pertinent to teaching methods for management development "makes the dearth of such research glaringly clear."\(^\text{37}\)

Mahoney, Jerdee and Korman (1960) point out that while there are more and more evaluation studies obtaining both before and after measures, there have been relatively few evaluation studies involving controlled experiments, although the experimental approach yields the most useful and relevant measures for evaluation. They cite that application of the experimental approach to evaluation of management training has grown slowly, probably because of a reluctance to withhold training opportunities which might appear desirable from a portion of those who might benefit.

In an experimental study conducted by the Management Development Laboratory of the Industrial Relations Center, University of Minnesota, the authors concluded that the management training course was partially successful in achieving its objectives. They found significant improvements in ability to apply a special analytical approach and in attitudes toward self development. The case study technique was employed intensively. No significant improvements in knowledge of

\(^{37}\)Robert J. House, "Management Development Doesn't Develop Managers," a Mimeographed manuscript given to the researcher prior to the article's appearance in the Harvard Business Review.
management principles or in the intensity of case analysis were achieved. The overall results also suggest, stated the researchers, that the case approach may be inappropriate for teaching management concepts and principles. But the study does not indicate whether another approach such as the lecture method would have been any more effective. The authors suggested continuing research in the use of the case method.\(^{38}\)

**Evaluation of Sensitivity Training**

Perhaps the most persuasive and controversial technique employed in management development presently is T-group or sensitivity training in all of its many and varied forms. One of the most effective advocates of sensitivity training in organizational settings has been Argyris (1965).\(^{39}\) However, in an evaluation of sensitivity training programs, Porter (1965) points out that although sensitivity training is a powerful developmental tool and deserves an important place in any listing of potentially effective techniques in managerial behavior, there is

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relatively little evidence available evaluating its effects in improving job performance. 40

This lack of evidence is further apparent in Stock's (1964) review of T-group research. Stock infers that research about T-groups suggests a large checkerboard incompletely and unevenly filled in. In some areas questions are answered but in others the questions are clear but methodology or relevant theory to satisfy the questions is not yet fully developed. 41

T-group training has been the subject of much controversy. House (1966) points out there is much controversy over both the propriety and effectiveness of using T-groups as a method of management training. 42

On the positive side, Argyris (1965) concluded that during studies of T-groups it was possible to score on individual behavior and to plot aspects of learning during the T-group sessions. He also evolved a quantitative score of the


individual's competence. However, he cautioned that further studies are needed to validate these studies. But in summary, Argyris found that exploratory research has suggested that the categories can be used (1) with an encouraging degree of reliability, (2) an encouraging degree of predictive validity and (3) as the basis to describe increases or decreases in individual and group competence.

On the negative side, Buchanan (1965) reports an incident in which the use of T-groups throughout the organization resulted in rather traumatic effects upon an entire department because the style of management and the approach to problems which were emerging from the developmental effort came into conflict with that practiced at higher levels of the company. And Bennis and Schein (1965) report three incidents in which participants of T-groups experienced more tension upon return to the job after T-group training as a result of increased conflict with the people in their organizations who held values and attitudes incompatible with those recently acquired by the T-group participants.

House, while citing the potential psychiatric danger of attendance at T-group sessions, cautions that the programs be

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made available under conditions involving little risk of harm to the individual and only on a voluntary basis. He also advises careful screening to insure no admittance of people with psychiatric case histories or emotional instability. He also urges careful selection of the T-group leader and continued research in this field.45

Evaluation of the Managerial Grid Approach

A management training method that has some superficial resemblance to sensitivity training is the so-called "managerial grid" approach formulated by Blake and Mouton (1964). The essence of a managerial grid training program involves the persuasion of managers in problem-solving "laboratory seminars" that they should give strong attention simultaneously to both production and people by developing an ideal 9, 9 style. "A basic aim of 9, 9 management then, is to promote the conditions that integrate creativity, high productivity, and high morale through concerted team action."46

In one of the few evaluation studies of managerial grid programs, Malouf (1966) studied 11 managers and professional


people who participated in a week long course. Malouf adminis-
tered questionnaires after the sessions to eight bosses and nine
subordinates of three eligible managers. Malouf concluded that
participating managers became more effective in terms of getting
the job done, in conducting better meetings and in more careful
evaluation of contributions of others. But he also self-criticized
his study for lack of a control group for identifiable behavior
change comparison.47

In another study of the managerial grid approach, the
leading proponents themselves, Blake and Mouton, describe the
application and evaluation of their program in a large plant of
approximately 4,000 employees.48 The plant which was named
"Sigma" was part of a multi-plant company identified only as
"Piedmont." Among "Sigma's" 4,000 employees were some
800 managers and staff personnel who were all exposed to a
managerial grid training program beginning late in 1962. At the
request of the research manager in Piedmont's employee relations
department an evaluation study was designed to follow up the
effects of that program. The study included questionnaires,

47 Leroy G. Malouf, "Managerial Grid Evaluated," The
Training and Developmental Journal, Vol. 20, No. 3, March,
1966, p. 6.

48 R. R. Blake, J. S. Mouton, L. B. Barnes, L. E.
Greiner, "Breakthrough in Organizational Development," Harvard
Business Review, Vol. 42, No. 6, November/December, 1964,
pp. 133-155.
interviews, observations, and company records in order to separate program effects from non-program effects. The findings suggested that:

1. There is some evidence that Sigma's organization development program was responsible for several million dollars of controllable cost savings and profit increase. In addition, the program seems to have been responsible for a sizable increase in employee productivity during its first year.

2. Sigma's managers began follow-up projects having total organization implications to a degree never experienced prior to the organization development program.

3. Relationships between Sigma and Piedmont were considerably improved, partly as a result of the program.

4. There is some evidence that major shifts occurred in the behavioral patterns dominant values, and attitudes found among managers at Sigma. These shifts were in line with the goals of the managerial grid program. Improved boss-subordinate, group, and inter-group relations were reported by Sigma managers.

5. Colleague support seemed to be more important than boss support as a factor in managerial improvement according to subordinate managers.49

Although the results of this study cannot be disputed, it would appear that much more credibility could have been ascribed the evaluation effort if the locus of the study were identified.

49 Ibid., p. 133.
The Kepner-Tregoe Management Problem Solving and Decision Making Program

One additional management development technique to be discussed is the Kepner-Tregoe Management Problem Solving and Decision Making Program designed to improve the manager's skill in that important function. The program devised by Charles H. Kepner and Benjamin B. Tregoe, Jr. is predicated on the assumption that to learn the elements of problem solving and decision making the manager needs three essentials:

1. Information about the concepts and techniques which form the process of problem solving and decision making.
2. The opportunity to put these into practice, and
3. Feedback information on the results of his performance.50

In short, cite the authors, the manager needs awareness of new concepts, practices in applying them and feedback on the results of his performance.51 Feedback, unlike in most management development programs, is a critical element in the program. It enables the learner to see how the ideas, specific procedures and actions he used contributed to the final outcome.


The program consists of five consecutive one-day units. The sessions run from five to seven hours daily. The managers receive in advance certain study materials which provide the concepts and procedures which will be used during the experiences of problem analysis and decision making. Each participant receives background information on the APEX Company and ground rules covering each session. The managers meet as a group, the conferences are tape recorded which later provides the basis for leader discussion in analyzing with the team its analysis and reasoning of the assignment problem. Thus the controlled-experience situation provides a feedback and critique system for learning and application of the effective and recommended approach. By 1965 some 15,000 managers had participated in the program which is a regular part of the management development programs of leading corporations such as General Motors, Ford, DuPont, General Electric, Honeywell and IBM.

As a final note on both the Managerial Grid Program and the Kepner-Tregoe Program, this researcher corresponded with the staff of the General Motors Institute, Flint, Michigan, regarding its research evaluation studies of these programs. The Institute replied that they have been using the Kepner-Tregoe Management Problem Solving and Decision Making program since
1961 and Blake's Managerial Grid program since 1963. To this point, some 3,500 executives have participated in the Kepner, Tregoe program while 300-400 have participated in the Grid program.

Sahrbeck of the Institute informed the researcher that they had not established any scientific design for evaluation of these programs. However, he cited, "the reports we have received from management people on the application of the KTA concepts prove beyond any doubt that this has been a very valuable program. In many instances, results can be evaluated in terms of dollars and cents. Obviously, the Managerial Grid Program does not lend itself to similar evaluations."

Again, these seeming contradictions and lack of corroborative evidence are cited to further compound both the difficulty and elusiveness of attempting to evaluate management development activities.

The Evaluation of Insurance Management Development Programs

Since a review of the existing research on evaluation activity reflected little specific effort in the insurance business, the researcher sought to determine this to a reasonable conclusion.

52 Correspondence with Charles J. Sahrbeck, Jr., Director of Management Training, General Motors Institute, dated December 9, 1966.
LIAZA. The researcher corresponded with Dr. Wallace of the Life Insurance Agency Management Association. Dr. Wallace was questioned relative to evaluation studies conducted by either the research division of LIAZA or by research departments of its member companies. Dr. Wallace responded quickly and graciously. Enclosing a copy of a 1964 report on field management development programs of 17 major member companies, he indicated that "no attempt was made to evaluate these programs in the report. There are many problems in such an evaluation, one of which is the kind of criteria to employ."...

LOMA. In a telephone conversation with a representative of the Life Office Management Association the researcher discovered that the Association's evaluative studies of management development programs have been confined to post-program qualitative surveys. The evaluation consists of the administration of subjective questionnaires for completion by the participant. Some of the criteria for evaluation are the participants overall feeling...

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53 Dr. S. Rains Wallace, Vice President and Director of Life Insurance Agency Management Association, previously cited in the report as author and authority in the field of insurance research, training and development.

54 Correspondence directed to this researcher dated December 6, 1966.
concerning the personal values received from the program and change of attitudes as a result of participation.\footnote{Telephone conversation with Lynn Merrill, Director of Education and Training, Life Office Management Association, New York, New York, on December 27, 1966.}

\textbf{Nationwide Insurance Companies.} As indicated earlier in this paper, these companies are heavily committed to a continuing program of development at all levels of the organization. In addition to the management development programs administered by the Office of Marketing, one of which is the subject of this study, there are the management development programs sponsored by the Office of Personnel. One such program directly administered by the Department of Personnel Development deserves consideration. This was a two-week advanced management program conducted for the vice presidents and department directors. Some expressed specific objectives of the Advanced Management Programs are to have the Nationwide manager:

- become acquainted with the leading management ideas and personalities of the day
- strengthen his operational knowledge of the insurance business and Nationwide's role in the insurance industry
- share experiences with managers from other departments, geographic areas and companies
- be encouraged to seek their highest potential as individuals
...become better prepared in the elements leading to improved managerial performance

...see more clearly the expanded innovating role of the Nationwide manager in future operations.56

Six primary areas form the design base of the content presented in the conferences. They are:

1. The Nature of the Business Enterprise
2. The Nature of the Insurance Business
3. The Executive's Role in the Business Enterprise
4. The Environment in which the Executive and Enterprise Operate
5. The Character of Nationwide
6. The Individual in Management57

The faculty of this program is drawn from members of the Personnel Development Department and also visiting consultants and university professors of the highest professional eminence in their respective fields. Altogether some 200 managers have participated in this program conducted at Nationwide's Management Center near Worthington, Ohio.

With respect to evaluation of the program's effect upon the participant's job performance there are these considerations: there


57Ibid., p. 4.
is no routine follow-up of all participants. The participant's manual points out relative to program evaluation that "the state of the art is far short of systematic measurement of job performance at all--let alone measurement which could isolate effects of a two-weeks experience from all of the other influences on a man's performance."\textsuperscript{58}

However, qualitative feedback is sought to control the administration and modification of the program rather than evaluation of the participants. This feedback consists of informal contacts during the program, a closing day open request for reactions, and observations and a reaction questionnaire to be completed three months after the program. Additionally, key company personnel are sampled to seek observations of specific impacts and changes on corporate performance and on individual behavior.

Although a sampling of the qualitative written reactions reflects the usual variance of individual impression and opinion on the program, facilities and faculty members, there appears to be the following general consensus:

1. This is a beneficial and worthwhile program that increases a manager's sensitivity to the insurance business against a panoply of social and economic factors, forces and effects.

\textsuperscript{58}Ibid., p. 2.
2. There is a general appreciation for this kind of developmental experience with its mind stretching exposure to new ideas and approaches.

3. There appears to develop a better understanding of the process of management and management techniques.

4. The program provides an opportunity for inner reflection, soul searching, and self-assessment by the participating manager with a resultant impact upon personal development. 59

Others. In addition, the researcher wrote to authoritative representatives of the Metropolitan and Prudential Life Insurance Companies but disappointingly received no replies whatsoever to his inquiries. 60

Inference. The inference then is that there has been limited activity by either insurance associations or companies in the complicated area of quantitative evaluation of management development programs and more specifically the quantitative evaluation of field management development programs.

The Evaluation Problem

Management training grew out of the management man-power needs generated by World War II. However little thought

59 This analysis was made possible through the cooperation of Nationwide Personnel Development Department which readily opened its files to this researcher.

60 Correspondence by this researcher to the Research Departments of the Metropolitan Life Insurance Company, New York, and Prudential Life Insurance Company, Newark, New Jersey, dated December 1, 1966.
was given to its evaluation during the early post-war years. As time went on management began to ask questions about the effectiveness of management training. Randall (1960) points out that training directors were suddenly forced to justify their efforts to survive, whereas the legitimate objective of evaluation is to refine methods.  

Actually there is considerable disagreement on the need for evaluation of training. Andrews (1957) maintains that managers and instructors have intuition about the positive effects of training and that the need for a quantitative contribution may remain impossible.  

Mahler (1953), on the other hand, points out there are three levels of evaluation:

1. Common-sense evaluation, which may include reported facts, inferences or feelings—all rather unsystematically;

2. Systematic evaluation using quantitative methods decided upon in advance;

3. Experimental evaluation, which is measurement under controlled conditions.

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In a study of the evaluation of human relations training programs, Weschler, Tannenbaum and Zenger (1957) recognize the negative results of training produced by Buchanan (1955) and Fleishman, Harris and Burtt (1955). They also stress the thesis that the evaluation problem involves areas of concern such as the setting of objectives and the evaluation process itself. They also stress the importance and need for more subtle techniques in human relations evaluation which are capable of detecting changes throughout the training process both in attitudes and behavior. The authors cite "the requirement to distinguish between changes in attitude that can be openly expressed; those that are consciously known but privately held and those deeper personality reorganizations which operate at the unconscious level."

Among the newer evaluation methods they recommend projective techniques, critical incident observation forms, forced choice observation forms, and sociometric techniques. In this respect, the researcher feels more secure about evaluation techniques that can be employed with the instruments of this study.

In summary, the evaluation of training is not a simple process since evaluation determines what changes, if any, have

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occurred in the attitudes, skills and knowledge of the participants.

The major problems in evaluation are therefore:

1. Determining whether or not the training procedures under consideration actually result in modifications of the members concerned.

2. Determining whether or not the outcome of the training procedures have any demonstrable relationships to the achievement of organizational goals.65

Again, this researcher feels that the announced objectives of this study, and the instruments employed in this study along with the measurements of quantifiable variables that are employed made this research study a most valid attempt.
CHAPTER III
A REVIEW OF THE RESEARCH ON THE OHIO
STATE UNIVERSITY PERSONNEL RESEARCH
BOARD STUDIES

During the course of this paper, frequent references have
been made about The Ohio State University Personnel Research
Board Leadership Studies and Leadership questionnaires. With
the exception of the 'Biographical Sketch' all of the research
instruments used in this study were developed by staff members
of the Personnel Research Board at The Ohio State University.
The questionnaires represent partial results of a program of
basic research initiated in 1945 with the aims of "developing
research methods and of obtaining information which might lead
to a better understanding of leadership."¹

No claims are made for the validity of these questionnaires,
nor are the available data on the questionnaires sufficient for the

¹Ralph M. Stogdill and Carroll Shartle, Methods in the
Study of Administrative Leadership (Columbus: The Ohio State
University Bureau of Business Research Monograph No. 80,
establishment of norms in interpreting questionnaire scores. The questionnaires have been subjected to several tests of reliability and, in general, are reliable instruments for research purposes.

The Leader Behavior Description Questionnaire

The Leader Behavior Description Questionnaire (Appendix B) referred to as LBDQ was developed for use in obtaining descriptions of a supervisor by the group members whom he supervises. However, in this study the questionnaire was used by the supervisor of the district sales manager and by the manager himself.

As Stogdill points out, the LBDQ grew out of the work initiated by J. K. Hemphill. Further development of the scales was described by Hemphill, Coons and Shartle. Stogdill further mentions that empirical research by Halpin, Winer and Fleishman reduced the dimensions of leader behavior to two strongly defined factors, consideration and initiation of structure.

Stogdill (1959), however, evolved a new theory of role differentiation and group achievement and supported the theory

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2 Ralph M. Stogdill, "Leader Behavior Description Questionnaire Manual of Directions," (Columbus: The Ohio State University, Bureau of Business Research, 1963), Mimeographed, p. 1.

3 Ibid.
that a number of variables operate in the differentiation of roles in social groups. He included such factors as tolerance of uncertainty, persuasiveness, tolerance of member freedom of action, predictive accuracy, integration of the group, and reconciliation of conflicting demands. Other new factors suggested by empirical research were representation of group interests, role assumption, production emphasis, and orientation to superiors.

The LBDQ scales were first used in a study of an Army Airbourne unit and a state highway unit. Other studies followed. Stogdill further used the new scales in the study of industrial and governmental organizations.

**Definition of Sub-scales**

The new scales are incorporated in Form XII used in this study. Each sub-scale is composed of either 5 or 10 items. A sub-scale is necessarily defined by its component parts and represents a rather complex pattern of behaviors. Brief definitions of the sub-scales are listed below:

1. **Representation** - speaks and acts as the representative of the group. (5 items)

2. **Demand Reconciliation** - reconciles conflicting demands and reduces disorder to system. (5 items)

3. **Tolerance of Uncertainty** - is able to tolerate uncertainty and postponement without anxiety or upset. (10 items)
4. Persuasiveness - uses persuasion and argument effectively; exhibits strong convictions. (10 items)

5. Initiation of Structure - clearly defines own role, and lets followers know what is expected. (10 items)

6. Tolerance of Freedom - allows followers scope for initiative, decision, and action. (10 items)

7. Role Assumption - actively exercises the leadership role rather than surrendering leadership to others. (10 items)

8. Consideration - regards the comfort, well being, status, and contributions of followers. (10 items)

9. Production Emphasis - applies pressure for productive output. (10 items)

10. Predictive Accuracy - exhibits foresight and ability to predict outcomes accurately. (5 items)

11. Integration - maintains a closely knit organization; resolves inter-member conflicts. (5 items)

12. Superior Orientation - maintains cordial relations with superiors; has influence with them; is striving for higher status. (10 items)

Scoring the Sub-scales

The assignments of items to different sub-scales is indicated in the Record Sheet of the questionnaire. For example, the Representation sub-scale consists of items 1, 11, 21, 31, and 41. The sum of the scores for these five items constitutes the score for the sub-scale Representation. The score for

Ralph M. Stogdill, ibid., p. 6.
Demand Reconciliation consists of the sum of the scores assigned to items 51, 61, 71, 81, and 91. The score for Tolerance of Uncertainty consists of the sum of the scores on items 2, 12, 22, 32, 52, 62, 72, 82, and 92.

By transferring the item scores from the test booklet to the Scoring Sheet, it is possible to add the item scores quickly to obtain an accurate score for each sub-scale.

As Stogdill describes, there are no norms for the LBDQ.\textsuperscript{5} The questionnaire was designed for use as a research device. It is not recommended for use in management selection, placement or performance evaluation.

The Responsibility-Authority-Delegation Scales

Stogdill, in describing the RAD scales, cites that these scales constitute one segment of an integrated body of procedures developed for use in the description of leadership and administrative performance.\textsuperscript{6}

The scales were designed to measure different degrees of perceived responsibility, authority and delegation as exhibited by

\textsuperscript{5}Ralph M. Stogdill, \textit{ibid.}, p. 8.

\textsuperscript{6}Ralph M. Stogdill, "The RAD Scales Manual of Directions" (Columbus: The Ohio State University, Bureau of Business Research), Mimeographed.
individuals holding administrative or supervisory positions. Generally applicable within the organization, these scales were used in this study by the supervisor as he perceived the nature of the subordinate manager's degree of responsibility, authority and delegation. It was also used by the subordinate manager as a self-descriptive measurement.

In describing the construction of the RAD scales, Stogdill relates that the first step was to collect a large number of items describing different degrees or levels of Responsibility, a second set of items describing Authority, and a third set describing Delegation. More than 2,600 items were collected from staff members of The Ohio State University Personnel Research Board, businessmen, military personnel, and graduate students in Industrial Psychology. The items were edited, refined, duplications eliminated and then separate sets of items were prepared for measuring Responsibility, Authority and Delegation. Each item was rated on a zero (0) to eight (8) scale to determine its scale value. Items describing the highest degree of Responsibility, Authority, or Delegation were given the scale value of 8. Items describing the lowest degree of Responsibility, Authority, and Delegation were assigned scale value of 0.

7Ibid., p. 3.
Other items were assigned intermediate values with 4 representing a neutral (neither high nor low) descriptive item.

Validity of the Scales

No claims are made for the validity of the RAD scales. Response to the scales represent merely what a subject is willing to say about his Responsibility, Authority, and Delegation. Stogdill further relates that an observer's perceptions of his own Responsibility and Authority may condition his perceptions of another's Responsibility and Authority.\(^8\)

There are no norms at this point established for the RAD scales. The data presently accumulated constitute a start toward the building up of a body of information. In this respect, Stogdill suggests that the scales were devised for experimental purposes and should be used with caution as diagnostic devices. A complete copy of the RAD scale is included in the appendix of this study (Appendix B).

The Work Analysis Forms

The Work Analysis Forms (Appendix B) are designed to measure various aspects of administrative performance.\(^9\)

\(^8\)Ibid., p. 3.

\(^9\)Ralph M. Stogdill and Carroll L. Sharle, "Work Analysis Forms - Manual of Directions" (Columbus: The Ohio State University, Bureau of Business Research, 1963), Mimeographed.
The forms may be used as a subject for recording his estimates of the amount of time he spends on various kinds of work. They may also be used by an observer to record his estimates of another person's work.

In this study the Work Analysis Forms were used both as a self-descriptive device by the district sales manager and also used by the supervisor of the manager to record his estimates of the manager's work.

The Work Analysis Forms were modified to include in the section, "Time Spent in Contact with Persons," four important functional responsibilities of the district sales manager. These were: (1) Career Plan Administration. This is a financing function performed by the manager for new agents working on a draw against commission basis; (2) Field Training Supervision. This would indicate the degree of time spent on actively training and coaching agents in the field; (3) District Training Sessions. This includes group training meetings, conferences and seminars of a technical (product) or sales training nature; (4) District Meeting Participation other than Training Meetings. This would allow for time spent in meetings for informational and persuasive purposes as against being purely instructional.

Additionally, the section "Proportion of Time Devoted to Major Responsibilities" was modified to include "recruiting activities" as a major functional responsibility.
The Work Analysis Forms were developed for use in The Ohio State University Leadership Studies as a result of interviewing a sample of high level executives who were asked to describe their own work.

The concepts which the executives themselves find useful for describing their behavior are general in nature, involve some overlap among the items and are divided into three sections:

1. Personal contact (as a work method)
2. Individual effort (as a work method)
3. Major responsibilities (accomplished by work methods A and B)

There are no norms for the Work Analysis Forms. Although the research has revealed similar patterns of performance among groups of persons occupying similar positions in different organizations, there is also considerable variation among the individual members of these groups. For some types of positions performance in large organizations is found to differ from that in small organizations.\(^\text{10}\) Performance also varies with changes in task requirements. For these reasons, suggests Stogdill, it would be unwise to set up any arbitrary standards relative to the optimum distribution of working time in administrative positions.

\(^\text{10}\) Ibid., p. 4.
In summary, the research instruments are well adapted to the purposes of this study. And as mentioned earlier, their use in this research effort will provide additional application in another area of activity.

The next chapter will consider the setting for the study.
CHAPTER IV

A DESCRIPTION OF THE NATIONWIDE INSURANCE COMPANY'S MANAGEMENT DEVELOPMENT PROGRAM

At the Nationwide Insurance Companies there is a strong corporate commitment to the function of marketing. Formerly known as the Office of Sales, and since 1964 re-organized and recognized as the Office of Marketing, this office has full responsibility for the total marketing of the companies full range of insurance products and services.

Although the limitations of this paper do not permit a complete organizational analysis of the corporation, it would be in the interests of this study to briefly describe and illustrate the organizational arrangement of the Office of Marketing.

This office is headed up by a functional staff vice president who reports to the president. Reporting to the vice president as members of his marketing cabinet are the staff directors of agency, promotion and advertising, marketing manpower and the agency secretary. The director of agency in turn is responsible for the product development and
marketing of the various lines of insurance. The director of promotion and advertising is responsible for the total programs of product and service promotion and advertising. The agency secretary is in charge of all matters of agency support and administration in such relevant matters as managers' and agents' commissions, benefits, field office administration, production data accumulation, and field production quota allocation and distribution. Because of its responsibility for the management development program under study, the department of marketing manpower should be examined more extensively.

The director of marketing manpower has reporting to him the divisions of agent training, recruiting and sales management development. The agent training division is charged with the duties of developing and maintaining current product training portfolios and manuals for all lines of coverages. In addition, it develops training, agency developmental programs, seminars and workshops for administration by field sales management. The division of recruiting has the staff responsibility for the development and administration of a company-wide agent recruiting program. Finally, the division of sales management development has the obligation to develop and administer sales management development conferences and seminars on a company-wide basis for all of field sales management.
The Program of Sales Management Development

The responsibility for field sales management development lies of course, with the functional line management units. However, because of specialized and centralized facilities, abilities and staff, the sales management development division conducts initial, intermediate and advanced programs for field sales management. But before discussing individual programs and their objectives and content, it would be well to review the organizational structure of the field sales function.

The regional sales structure is depicted on page 75 and of particular interest to this study is the role and position of the district sales manager.

Organizational Relationships

As depicted on the organizational chart, the district sales manager reports to the regional sales manager who in turn reports, in most regions, to the regional sales superintendent. There are thirteen autonomous operating regions in the decentralized operations of the company, but three of these, because of size, do not staff the regional sales superintendent position.

Altogether there are currently 478 district sales managers who report to 43 regional sales managers. In turn, the district

1Source: Unpublished reports of the Office of Marketing, Nationwide Insurance Company, Columbus, Ohio.
REGIONAL SALES ORGANIZATION

Resident
Vice President

- Commercial Accounts Department Manager *
- Regional Underwriting Manager
- Regional Claims Manager
- Regional Sales Superintendent
- Regional Administration Manager
- Regional Personnel Manager

- Financial Plans Advisor
- Commercial Accounts Advisor *
- Regional Sales Managers

- Sales Manager Trainees
- District Sales Managers

- Agents

*Not staffed in all regions
sales managers direct the activities of some 6,000 full-time insurance agents.

The average length of service for the district sales manager is 8.3 years, but 53 percent have less than 5 years of service time, while 25 percent have less than 3 years service.\textsuperscript{2} The average district sales manager is responsible for approximately 10-15 agents and has an average annual income of $12,568 including incentive commissions.

A job description for the district sales manager is shown in Appendix B, page 211.

**Marketing Objectives for 1966**

Of particular interest to this study is the Office of Marketing's summary objectives for 1966. These include not only profitable growth, improved service, reduced loss ratios, reduced operating expenses but also a major commitment to management manpower development. The objectives indicate\textsuperscript{3} there was, in 1966, a major emphasis in building sales management and agency manpower strength, in identifying and selecting

\textsuperscript{2}Ibid.

\textsuperscript{3}Source: Unpublished reports of the Office of Marketing, Nationwide Insurance Company, Columbus, Ohio.
management personnel and in determining the need for immediate and advanced management training. In this light, the object of this study assumes particular significance.

**Sales Management Development Programs**

The Department of Marketing Manpower administers annual seminars and conferences for field sales management. These are conducted exclusively for the regional sales superintendents, the regional sales managers, the regional sales training managers, and the financial plans advisors. These are generally held in Columbus, Ohio and for the most part, at Nationwide's Management Center in Worthington, Ohio.

**The District Sales Manager Programs**

There are several sequential and progressive programs conducted for the District Sales Manager. These are the Basic School in Sales Management, the Intermediate School, the Advanced Seminar and the Graduate Seminar. The Basic School is intended for the newly appointed manager while the other programs are interspersed along the route of the manager's career. This study is concerned with an analysis of the influence of the Basic School upon its participants.
The Basic School in Sales Management

The Basic School in Sales Management is a five-day conference with sessions from 8:30 a.m. until 5:00 or 6:00 p.m., with an hour interval for lunch. The program is definitely work-oriented with the participants being required to complete evening study assignments in addition to attending a group dinner function, at which a top marketing executive is usually the guest speaker.

Prerequisites for Attendance. The participants in this program are newly appointed managers who have had approximately 8 to 18 months experience as a district sales manager with Nationwide. Although some managers have had external management experience with other companies, most participants have been selected from the agency ranks.

One basic and important prerequisite is that the manager successfully complete a field administered developmental program entitled "Basic Course in Sales Management." This is a comprehensive, self-study program designed for completion in 14 weeks. The course focuses on the fundamental responsibilities of recruiting, selection, financing (compensation), training and supervising the agency force. The textual material is adapted from the Life Insurance Agency Management Association program for the field sales manager. Generally the regional sales training manager will accredit the manager's eligibility for this mandatory conference.
The Objectives of the Conference. The objectives of the conference are patently stated:

1. To present and discuss the fundamental responsibilities of the district sales manager.

2. To present and discuss the necessary management principles and techniques for successful sales management.

3. To identify and enhance the important role of the district sales manager in accomplishing both corporate objectives and those of the Office of Marketing. 4

Since these objectives largely determine the justification for using The Ohio State Leadership Studies questionnaires, a brief discussion of them is in order.

Irrespective of their previous exposure to management concepts and techniques, the objective of implanting in the managers an understanding of the basic concepts of management are repeatedly implemented through:

1. Lectures on management philosophy and the basic functions of management.

2. Lectures on the techniques of recruiting, interviewing, selecting, training, and compensating the agency force.

3. Discussions on the principles of leadership, human relations and supervision.

4This formulation of objectives was derived by the researcher from an examination of various written departmental reports regarding the objectives of the program.
These aspects of the program were particularly pertinent to the application in this study of the Leader Behavior Description Questionnaire, the Responsibility-Authority-Delegation Scales and the modified Work Analysis forms.

More specifically, the printed programs, Appendix A, pp. 188-199 will substantiate the focus on the leadership role of the district sales manager; the emphasis on his functional responsibilities and an accentuation of the supervisory and human relations skills.


of the two programs except in the titles of the opening two periods on the first morning of the program. The two lectures on "You and Your Job" and the lectures entitled "The Principles and Functions of Management" and "Getting Results Through People" are identical except for the titles.

To sum up, the initial step in developing a research design for this study was to ascertain the objectives of the program. In this respect, an attempt has been made to relate the objectives and the content of the program to the questionnaires that were used in an effort to measure the effectiveness of the development program.

Organization and Procedure. The programs under study were held May 16-20 and October 3-7, 1966 at the Nationwide Management Center in Worthington, Ohio. The participants resided in the special resident facilities provided there.

On the evening prior to the beginning of the program, an informal buffet reception was held for the managers. During the reception, the managers were welcomed to the program and apprised of the forthcoming activities and events. Since few of the managers knew each other, the reception afforded an opportunity for them to become acquainted.

The evenings during the program were given over to case study work and preparation for the daily sessions. The printed
schedule, as indicated, provided a controlled pre-planned schedule including meal and refreshment periods.

Participants, Faculty and Facilities. Several observations may be noted about the 30 participants in the program. First, the development program represents the first exposure to a formalized management conference at the Nationwide Insurance Companies and is a phase of a sequential, continuing planned development program. Secondly, attendance at the conference is mandatory and the managers have a good estimation of what to expect. Third, the managers, as already noted, were for the most part not acquainted with each other prior to the program. Nor did they function as a team or group after the program. Fourth, there were no female managers. The managers, while coming from 18 states represented a reasonably homogeneous group having the same employer, similar salary and income levels, comparable managerial experience, age grouping and, of course, position responsibilities.

The faculty or staff for the Basic School consisted primarily of ex-district sales managers with combined collegiate background and field sales experience. Each program generally had guest instructors from The Ohio State University, or visiting management consultants, top management executives, or as in the case of this researcher, instructors from other functions within
the organization. Although theory was presented, the emphasis of the program centered on the pragmatic application of managerial skills and techniques.

A variety of training methods and techniques were employed to reinforce instruction. These included the lecture, general group discussions, small group discussions of selected cases and problems, role playing skits, question and answer sessions, and the in-basket technique. One interesting technique is the "Honest John" technique in which a participant is selected at random for an opening 15 minute verbal recitation or outline of the previous day's material. Such a technique has the effect of stimulating attention and note taking. Additionally, a variety of audio-visual aids were employed, including films, both 16mm sound and 35mm sound slide, recordings, the vu-graph overhead projector, and flip chart presentations.

The participants were presented with detailed outlines and supporting materials for all the sessions. The mood was always informal, recorded music before and after sessions helped create a permissive atmosphere conducive to learning. The managers freely participated, there was a sharing of experiences, and an air of camaraderie developed among the managers. Post-session discussions, germane to the program, continued afterwards in the lobby and in the living quarters of the participants.
The seminar and resident quarters at the Nationwide Management Center, Green Meadows Country Inn, Worthington, Ohio are considered among the finest accommodations in Central Ohio and were conducive to a favorable atmosphere for the program.

In brief, the faculty and the facilities were appropriate for the purposes of the program.

Although there were no written subjective measures of the program's effectiveness, the general responses and expressions are most favorable. However, favorable responses are no true measure of the program's effectiveness. Consequently, the present study attempts to find more objective measurements by employing an experimental research design. And now that the development program studied has been described, the next step is to describe the method used to study that program. The following chapter attempts to do just that.
CHAPTER V

METHOD AND RESEARCH INSTRUMENTS

As noted in the previous chapters, the present study was conducted primarily in connection with a week-long management development program held in Columbus, Ohio during two different weeks in 1966. One program was conducted during the week of May 16-20 and the other during the week of October 3-7.

Two separate and identical programs were studied in order to secure not only a sufficient population but also to test both programs for significant differences. Both programs were conducted by the department of marketing manpower, Office of Marketing, of the Nationwide Insurance Companies, for recently appointed district sales managers. The focal point of the study concerned the managers invited to this program and the objective of the study was to measure the effects, if any, of the management development program upon the managerial behavior of the participants. The specific objectives of the study were enumerated in Chapter I.

A brief discussion of the method employed in this study was also presented in Chapter I. The objective of this present chapter
is to describe the method in more detail. The pre-training phase of the study will be discussed first, followed by a discussion of the training phase, the post-training phase and the research instruments that were employed.

The Pre-training Phase

The Experimental Group. To secure approval for the study, the researcher obtained the approval of the director of marketing manpower who, in turn, secured approval of the vice president-Office of Marketing. The researcher then sought the direct cooperation of the manager of sales management development who, along with his staff, is directly responsible for the conduct and administration of the program. The researcher, who formerly was employed in the sales management development division was invited not only to personally administer the questionnaires to the experimental group, but was also invited to participate as a lecturer in the program. Eleven managers attended the May Basic School in Sales Management, and 19 attended the October program. The cooperation and support of the Office of Marketing was most commendable and assuredly a sine qua non of this study.

The researcher prepared sets of questionnaires for the 30 experimental group managers and their supervisors, the
regional sales managers. Thus the 30 managers and their super-
visors comprised the experimental group.

The sets of questionnaires, including a biographical sketch
were accompanied by two cover letters, one a supportive letter
from the director of marketing manpower (Appendix B, p. 203)
and the other an instructional letter from the researcher (Appen-
dix B, p. 204). Similar, but somewhat modified letters were
also constructed for the control groups.

The researcher, prior to administering the questionnaires
to the managers as a group, discussed the evaluation study, the
purpose, objectives and methods. In view of their involvement
in the post-training phase, the group's cooperation was solicited.
It was felt that the personal involvement of the researcher was
instrumental in securing cooperation by the participants in the
study.

The groups were informed of the Offices of Marketing and
Research's interest and support in this study. However, the
groups were personally assured of the independent and confidential
nature of the study that would insure the respondent's anonymity.
They were also assured they would receive a report including
the general observations and conclusions of the study. Participa-
tion in this study was considered fully optional and it was most
gratifying to receive 100 percent cooperation from the managers.
Mailing the Questionnaires

Although the pre-test questionnaires were personally administered to the district sales managers in the experimental groups, they were mailed to the supervisors (regional sales managers) in the experimental group. In five instances, the supervisor had more than one district sales manager in the experimental groups. Concurrently with the personal administration of the questionnaires at the development program, sets of questionnaires were sent to the supervisors in the experimental group. In all cases the questionnaires were pre-labeled with the respondent's name to insure identity and prevent error in testing. These were accompanied by cover letters (Appendix B, p.206) designed for the experimental group supervisor. The cover letter explained the nature and purpose of the study. The sets of questionnaires were mailed, along with addressed, postage-paid return envelopes, directly to the sales office of the manager. Although the sets of questionnaires in the study were processed through the company inter-office mail system, to reinforce the independent nature of the study, all questionnaires were returned to the attention of the researcher at his home address. In fact, the return envelopes and labels were of non-company origin.
The need for a control group in this study was evident.

As McGehee and Thayer point out

...the before and after method without a control group in collecting measures for training evaluation is rarely defensible. This is particularly true, when the outcomes of training can be measured only after a considerable time lapse. It can produce no accurate data as to the relative effectiveness of different training approaches to the same problem. It can give no answer as to whether or not training in a given situation is absolutely necessary. Only when the other variables which might affect the outcomes of training are held constant can causal relationships be inferred legitimately from measures secured by this procedure.1

The specific objectives of this study were enumerated in Chapter I. Each objective involves a decision whether a significant change has occurred, and, if so, whether this change can be related to the management development program under study.

It is on this basis that the use of a control group is indicated, otherwise no definite basis for confidence would exist for concluding that any changes that have occurred may be related to one variable as opposed to another.

1McGehee and Thayer, op. cit., p. 279.
Selection of the Control Group

Normally the participants in the Basic School in Sales Management are enrolled months in advance. In 1966 there were schools in May and October. In 1967 there are planned schools in March and October. Consequently, for this study, the control group for the May, 1966 Basic School in Sales Management was the 19 registrants already enrolled in the forthcoming October, 1966 Basic School. And the control group for the October, 1966 Basic School in Sales Management was the 14 registrants for the March, 1967 Basic School. Thus in this study, 13 members of the control group for the first half of the research experiment comprised most of the experimental group during the second half of the research experiment.

It was necessary to use the control group as a future experimental group in order to secure a sufficient statistical population of a homogeneous group. Otherwise, it would have been impossible to select a control group. The qualifications for attending the Basic School insure that the participant is managing a district with all its responsibilities. Thus the members of both the experimental and control groups are from the same statistical and homogeneous population.

In the opinion of the researcher, the fact that 13 district sales managers and their supervisors were at one time members
of both groups does not in any way negatively influence the nature of this study. It simply means that these 13 respondents and their supervisors completed a series of 5 sets of questionnaires instead of 3. The final set of questionnaires submitted by the control group 12 weeks after the May Basic School became the pre-test questionnaires for the October Basic School in Sales Management. The 13 then completed the remaining sets at 4 and 12 week intervals.

The same cut-off date was used for the control group questionnaires as was used for the experimental group questionnaires.

In summary, there were 66 sets of questionnaires used for both groups in the pre-training phase of this study. Sixty of the initial 66 sets were returned and considered usable.

The Post-Training Phases

Interim Period. Between the pre-training phase of the study and the first post-training phase, the researcher attended and participated in the development program at the Nationwide Management Center, Worthington, Ohio. A description of this program has already been presented in Chapter IV. Again, personal involvement by the researcher afforded the opportunity to explain the study to the managers and discuss it with them. In addition, attendance at the session reinforced the researcher's
conviction that The Ohio State University Leadership Studies questionnaires were appropriate for purposes of this study.

First Post-Training Phase

Four weeks after the conclusion of the development program, the first set of post-training questionnaires was mailed. The four-week lapse was chosen to allow time for some diminution of the "halo effect" that often follows this type program; to obtain responses before the impact of the program was lost and also, and importantly, to allow the researcher sufficient charting time of the quantifiable indices.

Mailing the Questionnaires

The sets of questionnaires were identical, with the exception of the cover, with the pre-training sets. Included in each of the sets to the 66 respondents was a cover letter by the researcher (Appendix B, p. 207). The cover letter essentially thanked the respondents for their cooperation, reiterated the purpose of the study and guaranteed the confidential nature of the study.

Follow-up

The majority of questionnaires were returned in the requested time period. In the few cases where there was delay, the researcher telephoned the respondents personally.
This action had an immediate and favorable response. An acknowledgment letter by the researcher was sent the respondents upon the receipt of his materials (Appendix B, p.207).

**Second Post-training Phase**

The second post-training set of questionnaires was mailed to the respondents 12 weeks after the development program.

This 12 week post-training phase was selected to determine, as Powell questions, whether the immediate training effects, if any, of the program are sustained or whether the effects commence to diminish during this period. Another reason for the 12 week test is that because of the very nature of the kinds of influences the Basic School would exert, these influences would not be felt immediately in the aftermath of the program.

For example, observable changes in actual recruitment of agents and improved training would not be immediately discernible. Nor would changes in income of the managers be immediately evident as a result of the agents' increased productivity. There is, to be sure, certain time lags before these phenomena occur, if they do occur.

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2 Reed M. Powell, Professor of Business Organization, The Ohio State University, as adviser to this researcher he suggested the application of the 12 week post-training phase in this study.
The second post-training set of questionnaires was accompanied by a cover letter signed by the researcher. This letter appears in Appendix B, p. 209. Essentially, it thanked the respondent for his cooperation and encouraged him to return the set of questionnaires within a definite period.

Follow-up

Upon receiving the completed sets of questionnaires the researcher sent the respondent a final note (Appendix B, p. 210) of appreciation for the respondent's cooperation and also a promise to inform the respondents of the results of the study. While the majority were returned within a two-week period, the researcher followed up by telephone on several tardy respondents.

Quantitative Data

One of the objectives of this study was to determine whether the subordinate of the executive would exhibit an observable change in such indices as sales activity, production and income as a result of the executive's participation in the program.

Consequently and coincidentally with the administration of the pre-test and post-test questionnaires, various quantitative data were assembled. This data consisted of individual district production data, sales activity data, income data and recruiting data.
District Production Data

Sales production by line of insurance was received for each representative district managed by the participating district sales manager. This data was secured for five weeks production before and the five weeks after the May development program and for eight weeks before and eight weeks after the October development program. It was impossible to receive earlier data on the May development program.

The data covered seven major lines of insurance and represented the monthly total agency insurance volume or premium amount. The data was selected from the "Paid and Delivered Production Report" and was compiled on each of the DSM respondents in the experimental and control groups.

The report included production data on personal auto coverages, commercial lines premium, personal fire premium, ordinary life volume, health premium, and life volume received. The life volume received figure is an indication of agency sales activity in life insurance. It represents total life insurance "sold" but not necessarily paid and delivered.

The figures for group insurance and hail premium are not included because of wide variances in regional production requirements. The production figures represent the total and true paid and delivered sales production of the respondents' total agency force.

District Sales Manager Volume Incentive

A meaningful and quantifiable relationship exists between the agent's insurance sales production and the district sales manager's income. In other words, the manager's commission or incentive compensation is a direct reflection of agency production.

Irrespective of the fact that managerial salary and income data is generally difficult to obtain, regardless of the organization, the researcher was fortunate in obtaining volume incentive data on the participating district sales managers in both the experimental and control groups. The volume incentive data reflects the accumulated and combined production incentive received by the manager as a result of the agents sales production. In effect, does the agent's sales activity and production increase as a result of the manager's attendance at the program?

The researcher secured incentive data for the four weeks prior to and four weeks after the programs.
Recruiting Activity Data

Since recruiting is a major functional responsibility of the district sales managers in this study, the researcher secured recruiting data for a 12 week period before and a 12 week period after both programs for both the experimental and control groups.

However, a certain caution of interpretation must be exercised here in that recruiting activity varies with the manpower demands of the various regions and districts as well as with seasonal activities such as holidays, graduations and summer vacations. In this study the researcher related agency recruiting to manpower needs.

An important indicator of recruiting activity is the number of "Aptitude Indexes" administered. The "Aptitude Index" is a combination agency application, and aptitude test with a statistically-validated cut-off score for an insurance sales position. Consequently, although a manager may administer the Aptitude Index to many prospective candidates, he may not necessarily contract with each applicant. However, the frequency of test administration is a measurement of his activity in the recruiting function.
The Research Instruments

The development of research instruments used in this study was fully described in Chapter II. In this section a brief summary will be given of the instruments, purpose, the scoring procedure and use in this study.

The Leader Behavior Description Questionnaire (LBDQ)

Purpose. The purpose of the LBDQ (Appendix B) is to obtain from the supervisor-respondents a description of their subordinate's leadership behavior and from the subordinate-respondents a description of their own leadership behavior. Either respondent makes his description by indicating on the LBDQ the frequency (always, often, occasionally, seldom, or never) with which he perceives the subordinate or himself to engage in certain types of leadership behavior.

Scoring. All of the 100 items on the LBDQ are scored. Each item is scored on the scale: 5, 4, 3, 2, and 1. In most cases, "always" has a value of 5. However, items 6, 12, 16, 26, 36, 42, 46, 53, 56, 57, 61, 62, 65, 66, 68, 71, 87, 91, 92, and 97 are scored negatively. That is, "always" is given a value of 1 and "never" is given a value of 5. The score for each dimension is the sum of the scores assigned to responses marked on each of the items in the dimension.
Use in this study. In this study, the LBDQ was completed by both the supervisor and his subordinate manager. In both instances the description was of the subordinate manager. The subordinate manager described himself, not his immediate supervisor. The LBDQ was administered in the pre-training and post-training phases of this study, and in this manner, test-retest scores were obtained.

The Responsibility-Authority-Delegation Scales (RAD)

Purpose. The RAD scales (Appendix B) were designed to measure degrees of perceived responsibility, authority, and delegation of individuals who occupy managerial positions. There are six scales, each with eight items. Scales I and IV measure responsibility, Scales II and V measure authority, and Scales III and VI measure delegation. The score for responsibility is the sum of the four items checked on Scales I and IV. The scores for authority and delegation are computed in the same manner. The possible range of scores on each scale is 3 to 15. The range of scores for responsibility, authority, or delegation is 6 to 30.

Use in this study. In this study, the RAD scales were completed by both the supervisor-manager and the subordinate manager. Since the items on the RAD scales are stated in the
first person, the supervisors were instructed to read these items as "he" instead of "I," so as to describe their subordinate manager.

The Work Analysis Forms

The Work Analysis Forms (Appendix B) represent a modified job description form designed to indicate quantitatively how a manager apportions his time between various aspects of managerial work. The forms may be used by a respondent for recording his estimates of the amount of time he spends on various kinds of work or they may be used by an observer to record his estimates of another person's work.

A respondent's estimate of the percentage of time spent in a given kind of work is his score for that item. As indicated in Chapter II, certain items were modified to include specific responsibilities more related to the work of a district sales manager. In this study, both the supervisor and the subordinate completed the Work Analysis Forms. In this instance the supervising manager recorded how he estimated the subordinate spent his time, and the subordinate performed a self-analysis of how he spent his time.
Summary of Methods Employed

1. The method employed in this study was essentially a before and after study of two different groups of insurance field sales manager and their supervisors, the regional sales managers.

2. The subjective information was collected by means of questionnaires previously developed and utilized by the Personnel Research Board of The Ohio State University. One of the announced objectives of this study was to add to the information available on these questionnaires. The questionnaires have been found to be reliable instruments for research purposes but not claims are made for their validity nor may available findings obtained through the use of the questionnaires in other studies be construed as norms in the strictest sense.

3. The questionnaires were used in this study on 6 different occasions before 2 week-long (five day) management development programs held in Worthington, Ohio in May and October, 1966, and again at 4 and 12 week intervals after the programs. As indicated, the two programs were identical and conducted by the division of sales management development of the Office of Marketing of the Nationwide Insurance Companies. The participants in the program were newly appointed district sales managers who were responsible for a district and its agency force.
4. Except for the administration by the researcher of the initial questionnaire at the beginning of each program, this was a mail questionnaire study. In other words, the second and third questionnaires were mailed to the respondents and then returned to the researcher. Although the researcher was present at the completion of the initial questionnaire, he was not present while the others were being completed.

The quantitative findings that resulted from the use of the above method will be presented in the following chapters.
CHAPTER VI
EVALUATION PROCEDURE

In order to determine whether the decided hypotheses were confirmed by a set of data, an objective procedure for either rejecting or accepting the hypotheses was established. This objective procedure was designed according to the nature of the research data.

The statistical procedure and criteria used in this study will be explained under the following headings:

1. Assumption of the experimental design method of evaluation
2. Explanation of the null hypothesis
3. Selection of the statistical tests
4. Explanation of significant difference

Assumption of Experimental Design Method of Evaluation.

To determine the degree of influence of the management development program upon the participants, the following comparisons were statistically established between the subordinate groups on the following variables:

1. The Leadership Behavior Description Questionnaire Data. The twelve previously discussed
sub-scales of this questionnaire were employed with both the experimental and control groups as well as with their superiors.

2. The Responsibility-Authority-Delegation Scale Data. The six individual scales along with their combined scores into three scale values were used on all groups described in the preceding paragraph.

3. The Work Analysis Form. The 34 items of this test, divided into 3 sections, were employed as variables with all groups in the study.

4. Composite Premium Index. This numerical index was developed as a criterion of agent or subordinate production and was employed, of course, with only the agent subordinates of the district sales manager experimental and control groups.¹

5. Recruiting Index. The determinant of recruiting activity was established for both the experimental and control groups of district sales managers. This was: (1) the number of agent aptitudes administered to potential insurance agents. This index reflects the manager's recruiting activity; a managerial responsibility much emphasized in the management program.

6. District Sales Manager Volume Incentive Data. This data is an accumulated commission or overwrite figure for the manager and reflects directly the sales call activity, the production and eventual income efficiency of his agents. It was computed for both the district sales managers of the experimental and control groups.

¹The formula for this index was determined by converting personal auto coverages into dollar figures (one coverage is equal to $30); adding commercial lines premium, fire premium, health premium, and group life premium. Life volume was also converted to premium at the rate of $24 per one thousand of life volume. The accumulated total represents paid and delivered production.
Theoretically, any observed differences between the groups, measured in terms of these variables should be attributed to the developmental program because both groups were drawn from the same population and were measured over the same period of time and received identical treatment with the exception of the management development program.

Explanation of the Null Hypothesis

A null hypothesis was especially considered for this experiment which used experimental and control groups where treatment, or training in this case, was applied to the experimental group but was absent for the control group. Presumably then, any significant difference between the two groups for the most part could be ascribed with confidence to the treatment and to no other cause.²

In general, regardless of the particular statistics used, a null hypothesis is a trial hypothesis asserting that no significant difference exists between sample parameters.

How small should the probability be of obtaining the difference observed, the null hypothesis being assumed, before the null hypothesis can be rejected and regard the difference as significant? Ferguson suggests that a rigorous standard should be

²Ferguson, op. cit., p. 132.
imposed. It is conventional to accept probabilities of either .05 or .01 as standards of significance. If the probability is equal to or less than .05 the difference observed could result from a sampling error, then the difference is said to be significant at the .05 or 5 percent level. If the probability is .01 or less, the difference is said to be significant at the .01 or 1 percent level or better.

Rejection of the null hypothesis at the 5 percent level of confidence indicates that the change or difference cannot be attributed to chance alone in more than five times out of a hundred. If the null hypothesis is rejected with this much confidence, the resulting change of difference is attributed to the introduced variable or variables. The null hypothesis is a hypothesis of no differences. It is usually formulated for the express purpose of being rejected. If it is rejected, the opposite hypothesis may be accepted.

As indicated earlier in this experiment, the following null hypotheses were tested:

1. The immediate manager of the executive participating in the developmental program will not observe a significant change in his leadership behavior.

3Ibid., p. 133.

4Sidney Siegel, op. cit., p. 6.
2. The immediate manager of the participating executive will perceive no significant change in the pattern of managerial functions exhibited by the executive.

3. The executive himself will perceive no significant change in the exercise of major functional responsibilities than before participation in the executive development program.

4. The executive himself will perceive no significant change in his leadership behavior.

5. The subordinate of the executive will exhibit no significant change in such indices as sales call activity, production and income as a result of the executive's participation in the management development activity.

Selection of Statistical Tests

It was decided to employ the most sensitive measurements adaptable to the data accumulated in this empirical study. And while the traditional, parametric tests of differences such as the "t" test, or analysis of variance were not discounted, an observation of the data indicated that the application of these tests might be inappropriate. The developed data did not seem to be normally distributed nor do they satisfy the requirement of homogeneity of variance.

As a statistical measurement, the "t" test for the significance of the difference between means assumes equality of the

5This decision was reached in joint determination with the Department of Consumer and Corporate Research, The Office of Finance Research and Planning, Nationwide Insurance Companies.
population variances. It assumes normality of the distributions of the variables in the populations from which the samples were drawn. Where the assumption of equality of variance is untenable, the ordinary "t" test should not be applied. Since it appeared that homogeneity of variance was not going to be satisfied it was decided to apply nonparametric or distribution free analysis.

Nonparametric Tests

Nonparametric tests are used in situations where little is known about the population distribution or these distributions depart appreciably from the normal distribution. A parametric test is a test whose model specifies certain conditions, such as being from normally distributed populations, about the parameters of the population from which the sample was drawn. The meaningfulness of the results of a parametric test depends on the validity of these assumptions.

A nonparametric test, on the other hand, is a test whose model does not specify conditions about the parameters of the population from which the sample was drawn. Certain assumptions are associated with the nonparametric test, i.e., that the observations are independent and that the variable under study has underlying continuity.

6 Ferguson, op. cit., p. 143.

7 Siegel, op. cit., p. 31.
The advantages of nonparametric statistical tests are:

1. Probability statements obtained from most nonparametric statistical tests are exact probabilities (except in the case of large samples where excellent approximations are available), regardless of the shape of the population distribution from which the random sample was drawn.

2. There are suitable nonparametric statistical tests for treating samples made up of observations from several different populations. None of the parametric tests can handle such data without the researcher making seemingly unrealistic assumptions.

3. Nonparametric statistical tests can treat data which are inherently in ranks as well as data whose seemingly numerical scores have the strength of ranks.

4. Nonparametric methods are available to treat data which are simply classificatory, i.e., are measured in a nominal scale.8

Analysis of Variance - One Way Classification

It was decided to employ the analysis of variance technique for dividing the variation observed in experimental data into different parts, each part assignable to a known source, cause or factor.9 This technique is used to assess the relative magnitude of variation resulting from different sources and to ascertain whether a particular part of the variation is greater than expectation under the null hypothesis. The analysis of variance is inextricably associated with the design of experiments.10

8 Siegel, op. cit., p. 33.
9 Ferguson, op. cit., p. 227.
10 Ferguson, op. cit., p. 227.
It was decided to employ the Kruskal-Wallis (1952) one way analysis of variance for the Leadership Behavior Description Questionnaire, the RAD Scales, the Biographical data, and to the extent possible, the Pearson Product moment correlations were applied to this same data.

The Kruskal-Wallis One Way Analysis of Variance

This is a rank test for "k" independent samples. It is a one-way analysis of variance by ranks. The null hypothesis is that the "k" independent samples are drawn from the same population. To apply this test all the observations for the "k" samples are ranked. The lowest value is assigned a rank of 1, the next lowest 2 and so on. The sum of ranks, $R_i$ for each of the "k" samples is obtained. A statistic $H$ is calculated from the data. This is defined by:

$$H = \frac{12}{N(N + 1)} \sum_{i=1}^{k} \frac{R_i^2}{n_i} - 3(N + 1)$$

where $n_i = \text{number of observations in sample } i$

$N = \text{total number of observations}$

$R_i = \text{sum of ranks for sample } i^{11}$

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$^{11}$Ferguson, op. cit., p. 271.
The Friedman Two Way Analysis of Variance

Additionally, the Friedman (1937) two way analysis of variance by ranks was indicated for the Work Analysis Form. This is a rank test for "k" correlated samples. Basically the data are a set of "k" observations for a sample of N individuals. This test is considered applicable where the subjects are tested under a number of different experimental conditions. The corresponding parametric test is an analysis of variance for two way classification where observations are made on each of a group of individuals under more than two conditions. If there is reason to believe that the assumptions underlying the parametric analysis of variance are not satisfied by the data, as was felt in this experiment, then the Friedman rank method is appropriate. 14

Explanation of Significant Difference

The differences between the means, and the scores of the Kruskal-Wallis and Friedman tests, on both a before and after basis were tested for significance. A 5 percent level of confidence was established as the criterion which had to be met to establish significant differences. If the difference is significant at the 5 percent level of confidence, this means that such a difference could occur not more than 5 percent of the time by chance alone.

14 Ferguson, op. cit., p. 272.
CHAPTER VII
QUANTITATIVE FINDINGS

In this chapter the quantitative findings of the experiment will be related. In this chapter the following will be discussed:

1. The Research Experiments
2. Classification of the Data
3. Size and Composition of the Sample
4. Analysis of Self-Description Data
5. Analysis of the LBDQ Data
6. Analysis of the RAD Scale Data
7. Analysis of the Kruskal-Wallis Nonparametric Test
8. Analysis of the Friedman Nonparametric Test
9. Analysis of the Pearson Product Moment Intercorrelations

The Research Experiments

Originally it was contemplated to combine the populations of both management development programs under study in order to secure a sufficient statistical population. But upon consultation and with the use of nonparametric tests it was decided to treat each
developmental program as a separate experiment independent of each other. It would prevent the inclusion of differences, however slight in one program from the other. More importantly, the results of independent analysis of each program if they were duplicated in each program would lend more significance to this study.

**Classification of the Data**

To facilitate communication as well as the processing of the data collected in this study, the study was divided into two phases, one phase for each developmental program. Each phase consisted of three testing periods; one pre-test and two post-testing times. The pre-test, as described earlier, was administered prior to the management development program, and the post-tests were administered at 4 and 12 week intervals after the programs. Concurrently with the time periods, production, recruiting activity and income data were accumulated.

An outline of the programs and groups was as follows:

**Phase I - May, 1966 Sales Management Development Program**

**Time Periods:**

1 - The Pre-program period  
2 - Four Week Post-program period  
3 - Twelve Week Post-program period
Groups:
01 - Experimental Group (District Sales Managers)
02 - Control Group (District Sales Managers)
03 - Experimental Group (Regional Sales Managers) of supervisors
04 - Control Group (Regional Sales Managers) of supervisors

Phase II - October, 1966 Sales Management Development Program

Time Periods:
4 - The Pre-program period
5 - Four Week Post-program period
6 - Twelve Week Post-program period

Groups:
01 - Experimental Group (District Sales Managers)
02 - Control Group (District Sales Managers)
03 - Experimental Group (Regional Sales Managers) of supervisors
04 - Control Group (Regional Sales Managers) of supervisors

Size and Composition of the Samples

In Phase I, as Table 1 provides, an original 11 sets of questionnaires were distributed to the initial experimental group and its superiors (Groups 01 and 03) and 20 sets to the control group and its supervisors (Groups 02 and 04). These sets were distributed before and at 4 and 12 weeks after the program. After the loss of one control manager and his corresponding superior, the control group was reduced to 19 members. In short, during Phase I there were 11 members in the experimental group and 19 in the control group.
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<th>Period 3</th>
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<tr>
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<td>11 19 11 19</td>
<td>11 19 11 19</td>
</tr>
<tr>
<td>Returned sets of usable questionnaires</td>
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<td>11 19 11 19</td>
<td>11 19 11 19</td>
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<tr>
<td>Less sets of questionnaires for which corresponding questionnaires were not completed</td>
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<tr>
<td>Total number of sets of questionnaires used</td>
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<td>11 19 11 19</td>
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In Phase II, as indicated in Table 2, an original 19 sets of questionnaires were distributed to the initial experimental group and its superiors (Groups 01 and 03) and 13 sets to the control group and its superiors (Groups 02 and 04). Of the original distribution, 18 sets of questionnaires belonging to the experimental groups and 12 sets of questionnaires belonging to the control groups were considered usable. In summary, during Phase II the samples consisted of 18 members in the experimental groups and 12 in the control groups.

The attrition of the sample, however slight, was because of such factors as organizational changes and changes in the immediate superiors of the participants. There was also change in the sample size because of the death of one of the respondents. Attrition, in this study, possibly might have been greater had this not been an intra-company study officially sponsored by the Office of Marketing, but conducted independently of it, in which the researcher enjoyed general rapport with the participants involved. There was an acquaintanceship with the majority of participants and additionally, the researcher was able to stimulate respondent cooperation by personal contact and telephone follow-up.
### TABLE 2

**SUMMARY OF QUESTIONNAIRES DISTRIBUTED, RETURNED AND USED**

**PHASE II, TIME PERIODS 4, 5, AND 6**

**GROUPS 01, 02, 03, AND 04**

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<tr>
<td>Less sets of questionnaires for which corresponding questionnaires were not completed</td>
<td>- - - -</td>
<td></td>
<td></td>
<td></td>
<td>1 1 1 1</td>
<td></td>
<td></td>
<td></td>
<td>- - - -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of sets of questionnaires used</td>
<td>18 12 18 12</td>
<td></td>
<td></td>
<td></td>
<td>18 12 18 12</td>
<td></td>
<td></td>
<td></td>
<td>18 12 18 12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis of Self-Description Data - Phase I, Groups 01 and 02

The means in Table 3 provide self-description information on the 11 managers that comprise Group 01 and the 19 that comprise Group 02. Group 01, the experimental managers, averaged 34.09 years (Standard Deviation = 5.68). They have had an average of 15 years of formal education (S.D. = 2.41) or about 3 years of college education. They have spent an average of 36.18 months as agents (S.D. = 26.05) in Nationwide before becoming managers. As district sales managers they have had an average of 9.91 months experience (S.D. = 8.41).

Group 02, the control group, averages 34.32 years (S.D. = 5.47) in age. They have an average of 13.84 years of education (S.D. = 1.46) and were agents of Nationwide for an average of 34.32 months (S.D. = 22.11) before becoming managers. As managers they have had an average of 6.42 months (S.D. = 5.97) experience.

Analysis of Self-Description Data - Phase II, Groups 01 and 02

Group 01, the 18 managers (Table 4), of the Phase II program averages 35.28 years (S.D. = 6.45) of age. They have had an average of 13.94 years (S.D. = 1.43) of education and have had an average of 30 months (S.D. = 21.02) experience
TABLE 3

SELF DESCRIPTION QUESTIONNAIRES, GROUPS O1 AND O2
PHASE I, MEANS AND STANDARD DEVIATION

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Group O1 (N = 11)</th>
<th>Group O2 (N = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age in years</td>
<td>34.09, 5.68</td>
<td>34.32, 5.47</td>
</tr>
<tr>
<td>2</td>
<td>Years of education</td>
<td>15.00, 2.41</td>
<td>13.84, 1.46</td>
</tr>
<tr>
<td>3</td>
<td>Months as an agent with Nationwide</td>
<td>36.18, 26.05</td>
<td>34.32, 22.11</td>
</tr>
<tr>
<td>4</td>
<td>Months as a District Sales Manager with Nationwide</td>
<td>9.91, 8.41</td>
<td>6.42, 5.97</td>
</tr>
<tr>
<td>Variable Number</td>
<td>Variable Description</td>
<td>Group 01 (N = 18)</td>
<td>Group 02 (N = 12)</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>1</td>
<td>Age in years</td>
<td>35.28 ± 6.45</td>
<td>36.08 ± 5.86</td>
</tr>
<tr>
<td>2</td>
<td>Years of education</td>
<td>13.94 ± 1.43</td>
<td>12.83 ± 1.76</td>
</tr>
<tr>
<td>3</td>
<td>Months as an agent with Nationwide</td>
<td>30.00 ± 21.02</td>
<td>48.08 ± 4.61</td>
</tr>
<tr>
<td>4</td>
<td>Months as a District Sales Manager with Nationwide</td>
<td>6.89 ± 6.23</td>
<td>14.08 ± 1.45</td>
</tr>
</tbody>
</table>
as Nationwide agents. They average 6.89 months (S.D. = 6.23) experience as managers.

The control group (Group 02) of 12 managers averages 36.08 years of age (S.D. = 5.86); have had an average of 12.83 years of education (S.D. = 1.76); have been agents for an average of 48.08 months (S.D. = 4.61) and have been managers for an average of 14.08 months (S.D. = 1.45).

Analysis of Self-Description Data - Phase I, Groups 03 and 04

Group 03, 11 superiors of the experimental group in Table 5 average 44.0 years in age (S.D. = 11.08); have an average of 13.92 years of education (S.D. = 1.70); have been agents previously for an average of 39.18 months (S.D. = 24.92) and have been district sales managers for an average of 48.27 months (S.D. = 32.90).

By the same token, the 19 members of the Group 04, the control group superiors, average 48.32 years of age (S.D. = 8.29); they have an average of 14.11 years of education (S.D. = 1.55) and have an average of 28.53 months (S.D. = 23.44) months experience as a Nationwide agent. As a group, they averaged 67.47 months experience (S.D. = 43.76) as district sales managers before becoming superiors.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Group 03 (N = 11)</th>
<th>Group 04 (N = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age in years</td>
<td>44.00</td>
<td>48.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.09</td>
<td>8.29</td>
</tr>
<tr>
<td>2</td>
<td>Years of education</td>
<td>13.82</td>
<td>14.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.70</td>
<td>1.55</td>
</tr>
<tr>
<td>3</td>
<td>Months as an agent with Nationwide</td>
<td>39.18</td>
<td>28.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24.92</td>
<td>23.44</td>
</tr>
<tr>
<td>4</td>
<td>Months as a District Sales Manager with Nationwide</td>
<td>48.27</td>
<td>67.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32.90</td>
<td>43.76</td>
</tr>
</tbody>
</table>
The Group 03 superiors of Table 6 are 18 in number, and average 48.0 years of age (S.D. = 6.09). They have 14.61 years of education (S.D. = 1.57) and have spent 30.22 months (S.D. = 23.99) as agents with Nationwide. They have had an average of 68.06 months experience (S.D. = 44.52) as district sales managers before becoming superiors.

Group 04 (N = 12, on the other hand, average 45.58 years of age (S.D. = 9.95); have had an average of 14.53 years of education (S.D. = 1.55) and have spent 31.08 months as an agent (S.D. = 38.18) before becoming district sales managers, which position they held for an average of 45.83 months (S.D. = 33.63) before becoming superiors (a Regional Sales Manager).

Table 7 represents the mean and standard deviation for the experimental and control managers of the May, 1966 management development program. Variables 7, 8, 9, 10, 11, 12, 13 have a score of 50. Variables 5, 6, 14 and 15 have a maximum score of 25. The means of the variables are relatively high. For example, the average score for Group 01 is 42.64 (S.D. = 2.77) on Variable 12 Consideration and 43.55 (S.D. = 2.97) on Variable 9 Initiating Structure.
### TABLE 6

**SELF DESCRIPTION QUESTIONNAIRES, GROUPS 03 AND 04  
PHASE II, MEANS AND STANDARD DEVIATION**

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Group 03 (N = 18)</th>
<th>Group 04 (N = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age in years</td>
<td>48.00</td>
<td>45.58</td>
</tr>
<tr>
<td>2</td>
<td>Years of education</td>
<td>14.61</td>
<td>14.53</td>
</tr>
<tr>
<td>3</td>
<td>Months as an agent with Nationwide</td>
<td>30.22</td>
<td>31.08</td>
</tr>
<tr>
<td>4</td>
<td>Months as a District Sales Manager with Nationwide</td>
<td>68.06</td>
<td>45.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Age in years</td>
<td>48.00</td>
<td>6.09</td>
<td>45.58</td>
<td>9.95</td>
</tr>
<tr>
<td>2 Years of education</td>
<td>14.61</td>
<td>1.57</td>
<td>14.53</td>
<td>1.55</td>
</tr>
<tr>
<td>3 Months as an agent with Nationwide</td>
<td>30.22</td>
<td>23.99</td>
<td>31.08</td>
<td>38.18</td>
</tr>
<tr>
<td>4 Months as a District Sales Manager with Nationwide</td>
<td>68.06</td>
<td>44.52</td>
<td>45.83</td>
<td>33.63</td>
</tr>
<tr>
<td>Variable Number</td>
<td>Variable Description</td>
<td>Period 1</td>
<td>Period 2</td>
<td>Period 3</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------</td>
<td>---------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>01</td>
<td>02</td>
<td>01</td>
</tr>
<tr>
<td>5</td>
<td>Representation</td>
<td>20.27</td>
<td>3.54</td>
<td>21.00</td>
</tr>
<tr>
<td>6</td>
<td>Reconciliation</td>
<td>19.64</td>
<td>1.07</td>
<td>20.79</td>
</tr>
<tr>
<td>7</td>
<td>Tol. Uncertainty</td>
<td>35.18</td>
<td>4.20</td>
<td>34.32</td>
</tr>
<tr>
<td>8</td>
<td>Persuasion</td>
<td>40.27</td>
<td>2.83</td>
<td>41.79</td>
</tr>
<tr>
<td>9</td>
<td>Structure</td>
<td>43.55</td>
<td>2.97</td>
<td>44.32</td>
</tr>
<tr>
<td>10</td>
<td>Tol. Freedom</td>
<td>41.00</td>
<td>3.74</td>
<td>38.68</td>
</tr>
<tr>
<td>11</td>
<td>Role Assumption</td>
<td>41.36</td>
<td>4.50</td>
<td>44.95</td>
</tr>
<tr>
<td>12</td>
<td>Consideration</td>
<td>42.64</td>
<td>2.77</td>
<td>42.00</td>
</tr>
<tr>
<td>13</td>
<td>Production Emphasis</td>
<td>41.46</td>
<td>3.75</td>
<td>43.16</td>
</tr>
<tr>
<td>14</td>
<td>Predictive Acc.</td>
<td>19.55</td>
<td>1.78</td>
<td>19.53</td>
</tr>
<tr>
<td>15</td>
<td>Integration</td>
<td>21.46</td>
<td>1.88</td>
<td>22.26</td>
</tr>
<tr>
<td>16</td>
<td>Superior Orient.</td>
<td>42.82</td>
<td>3.19</td>
<td>43.21</td>
</tr>
</tbody>
</table>
These scores may be compared to the maximum score of 50.0 for each of the two dimensions. An approximate interpretation of a 42.64 scale on the Consideration sub-scale would be that the managers feel that they "often" (as opposed to "always") perform those things that would rank them high on the Consideration sub-scale. The same approximate interpretation could be applied to the 43.55 score on the Initiating Structure scale.

The significant differences as developed by the Kruskal-Wallis test between Groups 01 and 02 during time periods 1, 2, and 3 will be discussed later in this chapter.

Leadership Behavior Description Questionnaire Data — Phase I, Time Periods 1, 2, and 3, Groups 03 and 04

Table 8 projects the means and standard deviations of the superiors of both the experimental and control groups in the May Sales Management Development Program. Although the significant differences will be discussed in Tables 17 and 18, it should be observed that in terms of mean scores, the superiors consistently score their managers lower on Variables 12 and 9 than the managers rank themselves.

The significant differences between Groups 03 and 04 will be discussed below.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>03</td>
<td>04</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Mean</td>
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<td>Representation</td>
<td>19.64</td>
<td>3.89</td>
<td>18.42</td>
</tr>
<tr>
<td>6</td>
<td>Reconciliation</td>
<td>20.27</td>
<td>6.24</td>
<td>18.84</td>
</tr>
<tr>
<td>7</td>
<td>Tol. Uncertainty</td>
<td>33.09</td>
<td>6.23</td>
<td>32.26</td>
</tr>
<tr>
<td>8</td>
<td>Persuasion</td>
<td>39.91</td>
<td>4.64</td>
<td>38.68</td>
</tr>
<tr>
<td>9</td>
<td>Structure</td>
<td>40.18</td>
<td>3.51</td>
<td>39.00</td>
</tr>
<tr>
<td>10</td>
<td>Tol. Freedom</td>
<td>33.64</td>
<td>3.11</td>
<td>36.00</td>
</tr>
<tr>
<td>11</td>
<td>Role Assumption</td>
<td>41.62</td>
<td>4.27</td>
<td>40.00</td>
</tr>
<tr>
<td>12</td>
<td>Consideration</td>
<td>41.55</td>
<td>2.68</td>
<td>39.90</td>
</tr>
<tr>
<td>13</td>
<td>Production Emphasis</td>
<td>41.46</td>
<td>4.46</td>
<td>40.32</td>
</tr>
<tr>
<td>14</td>
<td>Predictive Acc.</td>
<td>18.09</td>
<td>1.16</td>
<td>18.42</td>
</tr>
<tr>
<td>15</td>
<td>Integration</td>
<td>20.82</td>
<td>2.59</td>
<td>20.11</td>
</tr>
<tr>
<td>16</td>
<td>Superior Orient.</td>
<td>40.73</td>
<td>4.11</td>
<td>39.95</td>
</tr>
</tbody>
</table>

**TABLE 8**

LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRES SUB-SCALES, MEANS AND STANDARD DEVIATION, PHASE I, TIME PERIODS 1, 2 AND 3

Groups 03 (N = 11) and 04 (N = 19)
Leadership Behavior Description Questionnaire Data -
Phase II - Time Periods 4, 5, and 6,
Groups 01 and 02

Table 9 represents the mean scores and standard deviations of the managers of the experimental and control groups in the October, 1966 Sales Management Development Program. Both groups of managers also perceive themselves as scoring high on Variable 12 - Consideration, and Variable 9 - Initiating structure. This high self-estimation of behavior reflective of consideration and initiation is consistent in terms of the "often" degree of measurement found in Groups 01 and 02 in Phase I. Again, significant differences will be discussed below.

Leadership Behavior Description Questionnaire Data -
Phase II - Time Periods 4, 5, and 6,
Groups 03 and 04

Table 10 displays the means and standard deviations of the superior scores for the experimental and control group managers during Phase II. Again, these groups of superiors, as did the Phase I superiors, score their subordinates lower in consideration and initiating structure than the managers described their own consideration and initiating structure. Significant differences are projected later in this chapter.
TABLE 9

LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRES SUB-SCALES, MEANS AND STANDARD DEVIATION, PHASE II, TIME PERIODS 4, 5, AND 6

Groups O1 (N = 18) and O2 (N = 12)

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Period 6</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td>5</td>
<td>Representation</td>
<td>21.17</td>
<td>2.06</td>
<td>21.56</td>
</tr>
<tr>
<td>6</td>
<td>Reconciliation</td>
<td>20.17</td>
<td>2.43</td>
<td>19.00</td>
</tr>
<tr>
<td>7</td>
<td>Toler. Uncertainty</td>
<td>33.89</td>
<td>4.73</td>
<td>34.17</td>
</tr>
<tr>
<td>8</td>
<td>Persuasion</td>
<td>41.94</td>
<td>3.69</td>
<td>41.42</td>
</tr>
<tr>
<td>9</td>
<td>Structure</td>
<td>44.11</td>
<td>3.14</td>
<td>41.08</td>
</tr>
<tr>
<td>10</td>
<td>Toler. Freedom</td>
<td>36.61</td>
<td>4.61</td>
<td>39.17</td>
</tr>
<tr>
<td>11</td>
<td>Role Assumption</td>
<td>45.17</td>
<td>4.25</td>
<td>42.08</td>
</tr>
<tr>
<td>12</td>
<td>Consideration</td>
<td>41.33</td>
<td>2.87</td>
<td>40.75</td>
</tr>
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<td>Production Emphasis</td>
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<td>41.67</td>
</tr>
<tr>
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<td>Predictive Acc.</td>
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<td>1.34</td>
<td>19.33</td>
</tr>
<tr>
<td>15</td>
<td>Integration</td>
<td>22.33</td>
<td>2.11</td>
<td>21.67</td>
</tr>
<tr>
<td>16</td>
<td>Superior Orient.</td>
<td>43.22</td>
<td>2.55</td>
<td>41.33</td>
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</tbody>
</table>
### TABLE 10

**LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRES SUB-SCALES, MEANS AND STANDARD DEVIATION, PHASE II, TIME PERIODS 4, 5 AND 6**

Groups 03 (N = 18) and 04 (N = 12)

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Period 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>5</td>
<td>Representation</td>
<td>19.39</td>
<td>2.31</td>
<td>19.91</td>
</tr>
<tr>
<td>6</td>
<td>Reconciliation</td>
<td>18.50</td>
<td>2.46</td>
<td>19.42</td>
</tr>
<tr>
<td>8</td>
<td>Persuasion</td>
<td>39.94</td>
<td>4.44</td>
<td>38.25</td>
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<td>9</td>
<td>Structure</td>
<td>39.94</td>
<td>5.16</td>
<td>38.83</td>
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<td>Tol. Freedom</td>
<td>35.17</td>
<td>2.93</td>
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<td>Role Assumption</td>
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<td>5.08</td>
<td>40.92</td>
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<td>Consideration</td>
<td>39.39</td>
<td>4.44</td>
<td>40.33</td>
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<td>13</td>
<td>Production Emphasis</td>
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<td>3.40</td>
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<td>14</td>
<td>Predictive Acc.</td>
<td>17.44</td>
<td>2.24</td>
<td>19.08</td>
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<tr>
<td>15</td>
<td>Integration</td>
<td>19.17</td>
<td>2.79</td>
<td>20.42</td>
</tr>
</tbody>
</table>
Responsibility-Authority-Delegation Questionnaire Data -
Phase I - Time Periods 1, 2, and 3,
Groups 01 and 02

On Table 11 is given the mean scores and standard deviations for the 9 variables relevant to the individual and combined RAD scores. The individual RAD scale variables 17-22 have a maximum score value of 15, and the maximum value of variables 23-25 is 7.5.

The managers generally see themselves as consistently ranking reasonably high in these scales. Table 15 will relate any significant differences as evidenced by the Kruskal-Wallis measurement.

Responsibility-Authority-Delegation Questionnaire Data -
Phase I - Time Periods 1, 2, and 3,
Groups 03 and 04

Table 12 represents the mean scores and standard deviations of the superiors of the experimental and control groups managers in the May Program. The superiors seem to generally concur with the subordinate's estimation of responsibility but differ in their estimation of his degree of delegation. Any significant differences will be discussed later in this chapter.

Responsibility-Authority-Delegation Questionnaire Data -
Phase II - Time Periods 4, 5, and 6,
Groups 01 and 02

Table 13 reflects the means and standard deviations of the scores of the 18 experimental managers and 12 control group
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Responsibility Scale 1</td>
<td>11.27 .96</td>
<td>11.74 1.77</td>
<td>11.64 1.55</td>
</tr>
<tr>
<td>18</td>
<td>Authority Scale 1</td>
<td>12.91 1.24</td>
<td>12.47 1.45</td>
<td>12.10 1.24</td>
</tr>
<tr>
<td>19</td>
<td>Delegation Scale 1</td>
<td>12.18 1.64</td>
<td>11.37 1.78</td>
<td>11.46 1.50</td>
</tr>
<tr>
<td>20</td>
<td>Responsibility Scale 2</td>
<td>11.46 1.92</td>
<td>10.58 .99</td>
<td>10.82 1.11</td>
</tr>
<tr>
<td>21</td>
<td>Authority Scale 2</td>
<td>11.09 1.68</td>
<td>10.63 1.63</td>
<td>12.00 1.41</td>
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<tr>
<td>22</td>
<td>Delegation Scale 2</td>
<td>11.27 2.09</td>
<td>11.00 1.97</td>
<td>11.36 2.31</td>
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<td>23</td>
<td>Combined Responsibility Scales 1 and 2</td>
<td>5.67 .55</td>
<td>5.58 .58</td>
<td>5.55 .47</td>
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<td>24</td>
<td>Combined Authority Scales 1 and 2</td>
<td>6.01 .62</td>
<td>5.76 .60</td>
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<td>Combined Delegation Scales 1 and 2</td>
<td>5.94 .80</td>
<td>5.60 .86</td>
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### Table 12

**Responsibility-Authority-Delegation Scale Questionnaire, Mean and Standard Deviation, Phase I, Time Periods 1, 2, and 3**

Groups 03 (N = 11) and 04 (N = 19)

<table>
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<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
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<td>1.30</td>
<td>11.27</td>
<td>.86</td>
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<tr>
<td>18</td>
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<td>1.82</td>
<td>11.58</td>
<td>1.60</td>
<td>11.18</td>
<td>.58</td>
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<tr>
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<td>Delegation Scale 1</td>
<td>9.36</td>
<td>3.11</td>
<td>9.79</td>
<td>2.98</td>
<td>9.36</td>
<td>1.37</td>
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<tr>
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<td>9.73</td>
<td>.75</td>
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<td>10.32</td>
<td>1.66</td>
<td>10.91</td>
<td>1.24</td>
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<tr>
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<td>Delegation Scale 2</td>
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<td>1.85</td>
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<td>2.89</td>
<td>9.64</td>
<td>1.43</td>
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<td>.81</td>
<td>4.61</td>
<td>1.41</td>
<td>4.82</td>
<td>.43</td>
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</tbody>
</table>
## TABLE 13

RESPONSIBILITY-AUTHORITY-DELEGATION SCALE QUESTIONNAIRE, MEAN AND STANDARD DEVIATION, PHASE II, TIME PERIODS 4, 5, AND 6

Groups 01 (N = 18) and 02 (N = 12)

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<th>Variable Number</th>
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<th>Period 5</th>
<th>Period 6</th>
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<td>O1 SD</td>
<td>O2 Mean</td>
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<td>1.33</td>
<td>11.67</td>
</tr>
<tr>
<td>18</td>
<td>Authority Scale 1</td>
<td>12.33</td>
<td>1.16</td>
<td>11.58</td>
</tr>
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<td>Delegation Scale 1</td>
<td>11.28</td>
<td>2.02</td>
<td>10.42</td>
</tr>
<tr>
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<td>Responsibility Scale 2</td>
<td>11.17</td>
<td>1.68</td>
<td>11.08</td>
</tr>
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<td>21</td>
<td>Authority Scale 2</td>
<td>11.33</td>
<td>1.89</td>
<td>11.00</td>
</tr>
<tr>
<td>22</td>
<td>Delegation Scale 2</td>
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<td>3.66</td>
<td>9.75</td>
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<td>.64</td>
<td>5.51</td>
</tr>
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<td>Combined Authority Scales 1 and 2</td>
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<td>.65</td>
<td>9.96</td>
</tr>
<tr>
<td>25</td>
<td>Combined Delegation Scales 1 and 2</td>
<td>5.43</td>
<td>.99</td>
<td>5.03</td>
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</tbody>
</table>
managers in the Phase II program. The mean scores show a relatively high mean of responsibility and authority but a lesser mean score on delegation. Significant differences between the groups will be related later in this chapter.

Responsibility-Authority-Delegation Questionnaire Data - Phase II - Time Periods 4, 5, and 6, Groups 03 and 04

Table 14 indicates the mean scores and standard deviations of the superiors of the experimental and control group managers in the Phase II program. The superior scores reflect some differences in how the superiors see the delegation function as performed by the manager. The significant differences between groups are described later in this chapter.

Recruiting Activity and Volume Incentive - Phase I - Time Periods 1, 2, and 3, Groups 01 and 02

Since the function of agent recruiting was heavily stressed in the developmental program, it was felt that a measure of the program's influence would be the number of sales aptitude tests administered to prospective agents. Table 15 indicates that the mean number of aptitude tests administered by the managers in Group 01 was 1,18 (S.D. = 1.75) and tapered off slightly during the entire testing program. The mean of the control group however did likewise.
TABLE 14
RESPONSIBILITY-AUTHORITY-DELEGATION SCALE QUESTIONNAIRE, MEAN AND STANDARD DEVIATION, PHASE II, TIME PERIODS 4, 5, AND 6

Groups 03 (N = 18) and 04 (N = 12)

<table>
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<th>Period 5</th>
<th></th>
<th>Period 6</th>
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<td>SD</td>
<td>Mean</td>
<td>SD</td>
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<td>SD</td>
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<td>Responsibility Scale 2</td>
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<td>.69</td>
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<td>.34</td>
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<td>24</td>
<td>Combined Authority Scales 1 and 2</td>
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<td>.72</td>
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</table>
The volume incentive mean for Group 01 was $231.82 (S.D. = 76.37) four weeks prior to the program and did not seem to appreciate over the entire testing period.

**Recruiting Activity and Volume Incentive - Phases I and II**

Tables 15 and 16 give, for Phases I and II, the mean and standard deviations for Variable 26, Aptitude Tests Administered, and Variable 27, District Sales Manager Volume Incentive (Commission) based on agency production. There was no appreciable change in either variable over the testing periods in both programs. It is apparent by inspection since the standard deviations are so large, that there are no significant differences.

**Analysis of Kruskal-Wallis Data - Phase I -**

**Time Periods 1, 2, and 3,**

**Groups 01 and 02**

Table 17 represents the data accumulated by the Kruskal-Wallis test on 30 variables by group comparisons. The Kruskal-Wallis one-way analysis of variance by ranks as an evaluation test was described earlier in Chapter VI.

The Kruskal-Wallis is considered a useful test for deciding whether the independent samples are from different populations. The question to be answered here is whether the differences among the samples signify genuine population differences or whether they represent merely chance variations. The test assumes that the
<table>
<thead>
<tr>
<th>Variable Description</th>
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<th>Period 2</th>
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<td>Mean SD</td>
<td>Mean SD</td>
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<td>01</td>
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### Table 16

**RECRUITING ACTIVITY AND VOLUME INCENTIVE, MEAN AND STANDARD DEVIATION, PHASE II, TIME PERIODS 4, 5, AND 6**

**GROUPS 01 (N = 18) AND 02 (N = 12)**

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<td>01</td>
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<tr>
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<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
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<td>1.27</td>
<td>1.33</td>
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<td>Ho. as E.</td>
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</table>

Notes: * Significant Difference
variables under study have an underlying continuous distribution. It requires ordinal measurement of the variables.¹

There were no significant differences between the populations of the experimental and control groups prior to the May Sales Management Development Program except on Variable 13 - Role Assumption (LBDQ 7). It was significant at the .05 level. All other variables showed no significant differences. As a group, the experimental group scored themselves slightly lower on the tolerance of uncertainty sub-scale.

At the 4 week testing period a comparison of the 2 groups indicated a significant difference at the .05 level on Variable 13, the Role Assumption variable.

At Time Period 3, the 12-week data results reflected again a significant difference on the manager's Role Assumption. All other variables showed no significant relationships.

Analysis of Kruskal-Wallis Data - Phase I -
Time Periods 1, 2, and 3,
Groups 03 and 04

The analysis of variance between the scores of Groups 01 and 03 show that in Time Period 1 there was, of course, significant difference on the Variables 1 and 4 (age and length of experience as a district sales manager). In addition there was significant

¹Sidney Siegel, op. cit., p. 184.
difference on Variables 11 (LBDQ 5) Initiating Structure, at the .05 level; Variable 12 (LBDQ 6) Tolerance Freedom at the .001 level; Variable 16 (LBDQ 10) Predictive Accuracy at the .01 level of significant difference. Also, there was significant differences of .05 on the RAD scale Variable 21 and 22 and .001 on Variable 24. On the combined RAD scales, Variables 25 and 27 there were differences of .05 and .001 respectively. In other words, the managers' scores before the program were higher as to the differences mentioned in Role Assumption, Initiating Structure, Tolerance of Freedom, Predictive Accuracy and on their Responsibility and Delegation scales.

Concurrently, Group 02 in describing their own leadership behavior and degrees of Responsibility-Authority-Delegation, scored higher than those scores of the corresponding superiors (Group 04). Significant differences occurred on Variables 7, 8, 12, 14, 15, 17, and 18 (LBDQ 1, 2, 7, 8, 9, 11, and 12) at the .05 level. Differences also occurred on Variables 24 and 27 (Responsibility and combined Authority scales) at the .05 level.

At the four-week testing interval, Group 01 data in relationship to Group 03 evidenced significant differences on Variable 11 (LBDQ 6), Tolerance Freedom, and Variable 21 (Delegation) at the .05 level, and Variables 22, 24, and 26 (Responsibility-Authority and Delegation) at the .05 and .01 levels respectively.
Again the experimental group scores at the four-week period reflected higher estimations than those of their managers.

Group 02 at the four-week testing period also perceived their leadership behavior and degrees of Responsibility, Authority, and Delegation at a .001 level of significance on Variables 11, 12, 17, and 22; at the .05 level on Variables 12, 22, 25, and 26; and at the .01 level on Variables 5, 13, 14, 16, and 18.

At the 12-week period Group 01 scores in relationship to Group 03 showed significant differences on Variables 12, 21, 24, and 27, the Tolerance of Freedom, Delegation Scales I and II and the combined Delegation scales. Again, the experimental group perceived itself with higher values in the Tolerance of Freedom and particularly in the Delegation scales.

Group 02 at the 12-week period consistently, and in more variables than Group 01 scored significantly higher values at the .05, .01, and .001 levels than its superiors in all but 9 variables. Again, the superior envisions the behavior of the subordinate at lower levels than the subordinate himself perceives.

Conclusions Drawn From the Phase I Program

1. The pre-training experimental and control groups were drawn from the same population.

2. The difference between Groups 01 and 02 over the testing periods was significant on one variable, Role Assumption, and this difference was evident in the pre-program test.
3. There was no significant difference in the experimental group's Recruiting Activity over the 12-week period.

4. There was no significant difference in the amount of the experimental manager's volume incentive, or commission over the testing period.

5. The superiors of the experimental group perceived significant change in the leadership behavior, responsibility, authority, and delegation skills of the subordinate manager.

6. The managers of the experimental and control groups see themselves ranking higher in Leadership, Responsibility, Authority, and Delegation than their superior's estimations.

Analysis of Kruskal-Wallis Data - Phase II -
Time Periods 4, 5, and 6,
Groups 01 and 02

Table 18 represents the data by group comparisons accumulated in the October, 1966 Sales Management Program.

There was a significant difference between the populations of the experimental and control groups at the onset of the program on Variable 2 (Education) and on Variable 11 (LBDQ 5), Initiating Structure at the .05 level. All other variables showed no significant differences.

At the 4-week testing period a comparison of relationships established between Groups 01 and 02 showed significant differences,
### TABLE I

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<th>Gnp. 2: Gnp. 4</th>
<th>Gnp. 3: Gnp. 4</th>
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<th>Gnp. 2: Gnp. 5</th>
<th>Gnp. 3: Gnp. 5</th>
<th>Gnp. 4: Gnp. 5</th>
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- **Significant Differences**
  - .001 < 2.05 (1.366 > x^2 > 6.06)
  - .001 < .05 (6.069 > x^2 > 10.83)
  - .001 < .001 (10.83 > x^2 > 16.26)
  - .001 < .001 (x^2 > 16.26)

---

**Notes:**
- For significance, ** indicates p < .001,
- * indicates p < .01,
- ** indicates p < .001,
- *** indicates p < .001.
again, on the Initiating Structure variable and this time at the .01 level of confidence.

At the 12-week testing period, however, there was no significant difference on the Initiating Structure variable, but there was a difference on Variable 10 (LBDQ 4), Persuasion, at the .05 level; Variable 13 (LBDQ 7), Role Assumption, at the .01 level; Variable 18 (LBDQ 12), Superior Orientation, and the combined Responsibility Variable 25 at the .05 level.

Analysis of Kruskal-Wallis Data - Phase II - Time Periods 4, 5, and 6, Groups 03 and 04

The analysis of variance between Groups 01 and 03 before the training program showed significant differences between the superior and the subordinate scales on Variables 11, 13, 16, 17, 20, and 26 at the .01 level and on Variables 14, 18, 21, 23, and 27 at the .05 level.

At the 4-week testing period significant differences appeared on Variables 8, 10, 12, 15, 19, and 24. There was no differences on Variables 21 and 23 that appeared in the pre-program test.

At the 12-week period significant differences appeared on all Variables except 22, 23, and 24, and on the combined Authority and Delegation Variables 26 and 27.
Again, the experimental group sees itself managing at higher levels of managerial leadership when its scores are related to those of its managers.

Group 04 surprisingly evidences no significant differences in the Leadership or RAD Scales during the pre-program test, or during the test period at the fourth week. However, at the 12-week period there were significant differences in these scores on Variables 12, 17, 21, and 27. All are at the .05 level. This reasonable congruity of managerial description between Groups 02 and 04 cannot be explained except for the possible influence of chance and the possible small sample size.

Conclusions Drawn From the Phase II Program

1. The pre-training program experimental and control groups were drawn from the same population.

2. Significant differences between Groups 01 and 02 over the 4-week period were unobserved except for the Initiating Structure Variable and since this did not reoccur in the subsequent time periods there is a real likelihood it was a chance occurrence.

3. There were differences in relationships at the 12-week period at the .05 level of significance on the 4 leadership variables.

4. There was no significant change in the Recruiting activity of the managers over the 12-week period.
5. There was no significant difference in the managers' volume incentive or commissions over the testing periods.

6. The experimental managers' self-description of their leadership behavior was significantly different from their superiors' descriptions.

Analysis of Kruskal-Wallis One-Way Analysis of Variances by Time Periods

The Kruskal-Wallis analysis of variance was employed to discern variance, if any, within the groups themselves from time period to time period. In combination with the Kruskal-Wallis analysis of variance by group, it should relate any degrees of change that are accumulative in nature or that may be emerging gradually.

Table 19 displays the changes by time period to time period for Phases I and II for all testing periods. In Phase I, Group 01, the experimental group, from the pre-program test to the first 4 week test evidenced a significant difference in the number of agents licensed. This difference was not evident in the control group but did appear at the .01 level during Time Period 2 when the experimental group sustained a significant difference. A plausible explanation for this might be the result of intensified licensing activity for a temporary period for both groups which did not sustain itself into the third period.
### TABLE 19

Grubb-Willis One-Way Analysis of Variance by Time Periods, Phases I and II. Groups 8, 10, 32, and 34

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* No Significant Difference

\[ p > .01 \]

\[ p > .001 \]

** \[ p > .01 \]

\[ p > .001 \]

\[ x^2 > 30.83 \]

\[ x^2 > 10.83 \]
Group 03, in Time Period 1: Time Period 2 perceives significant difference in the RAD scale variables of Authority at the .05 level and Delegation at the .001 levels. Also in Phase I Group 04 reflects a significant difference on the Responsibility Variable at the .05 percent level.

Significantly, by omission there are no significant differences in the number of aptitude tests given or in volume incentive over any of the time periods. Neither is there difference on the important LBDQ variables of Initiating Structure and Consideration.

In Phase II, Group 01 reflected a significant difference in Responsibility at the .05 level from time period 1:2. In the absence of supporting and additional differences it would appear this was by chance, since the difference is not carried over into time periods 5:6.

Group 03, the superiors of the Phase II experimental managers, reflect a significant difference on the Authority single and combined variable.

There are no significant differences in any of the groups over time periods 4 and 5.

Again, and by omission, it was observed that there were no significant differences in the major LBDQ variables of Initiating Structure and Consideration, nor on the variables of Recruiting Activity and Volume Incentive.
Analysis of Friedman Nonparametric Test - Work Analysis Form Data

The Work Analysis questionnaire with 34 variables constituted a major element in this study. The questionnaire (Appendix B) attempts to account for a manager's time in terms of:

1. Time spent in various kinds of contact with persons
2. Time spent in various kinds of individual effort
3. Time spent in the execution of major responsibilities

There are 34 variables in the Work Analysis Form. Several variables were slightly modified to more specifically describe a manager's functional activities. In Section A, Item 5, Career Plan Administration was added; Item 6, Field Training of subordinates was included; Item 8, District Training sessions was added and Item 9, District Meeting Participation was included. In Section C, Item 29, Recruiting Activities was included with Personnel Activities.

All 34 variables were included in the study. The use of the NCR 315 was necessary to process the 34 variables of the questionnaire.

The Friedman Two-way Analysis of Variance by Ranks

The Friedman test was applied to the data of the Work Analysis Form because, as described earlier, of the problems
involved in the use of parametric tests and because of the percentage results data given by the questionnaire. The formula for the Friedman test is as follows:

\[
Xr^2 = \frac{12}{Nk (k + 1)} \sum_{i=1}^{k} R_i^2 - 3N (k + 1)
\]

This formula was applied to data converted to mean ranks from percentage scores. The Friedman test is particularly useful for testing the null hypothesis that the samples have been drawn from the same population.\(^2\) It is also useful for testing groups of subjects under different and various conditions.\(^3\) In this study the test is applied to the mean rank data of the Work Analysis Form for Phases I and II for all groups, over all the time periods.

Analysis of Data – Phase I – Time Periods 1, 2, and 3, Groups 01 and 02

Table 20 indicates that the experimental group data of 11 participants in Phase I on the WAF Section A was significant at the .01 level before the program and went to the .001 level over the testing periods. The WAF Section B data remained at the .001 level throughout the entire testing period. However, on the WAF Section C data, the Group 01 data evidenced no significant difference in the estimation of major responsibilities. In effect the experimental group before the Phase I program reflected a uniform
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<th>Work Analysis Form</th>
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<th>Phase I Group 02 (N=19)</th>
<th>Phase I Group 03 (N=11)</th>
<th>Phase I Group 04 (N=19)</th>
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- No Significant Difference

* .05 ≤ p < .01 (16.92 ≤ x² ≤ 21.67)
** .01 ≤ p < .001 (21.67 ≤ x² < 27.88)
*** ≤ .001 (x² ≥ 27.88)
#
## .01 ≤ p < .001 (27.69 ≤ x² < 34.53)
### ≤ .001 (x² ≥ 34.53)
estimation of time allocations to major responsibilities. However, this uniformity dispersed to an .001 significant difference 4 weeks after the developmental program and to a .01 level 12 weeks later. The tendency of the experimental group consequently was one of uniformity of estimation as to proper allocations of time to major functions to non-uniformity in allocations of time to responsibilities.

Group 02, the control group in Phase I, evidenced a .001 significant difference on all 3 sections of the form over all 3 time periods. There were no apparent changes over times in their estimations of time allocations to personal contact, individual effort and major responsibilities. The experimental group differed from the control group only on Section C of the WAF.

Analysis of Data - Phase I - Time Periods 1, 2, and 3 - Groups 03 and 04

The data of Group 03, the superiors of the managers in the experimental group, showed a .001 significant difference over all time periods, in the superior's estimation of how he visualizes the subordinate's allocation of time. The superior's (Group 03) ranking differed from the experimental subordinates in Section A, Time Period 1 (the .001 level to the .05) and on Section C (the .001 level) to no significant difference for the subordinate. In effect, the superiors, as a group did not perceive any change in the subordinates' allocations of time to functional responsibilities at
the periods 4 and 12 weeks respectively after the training pro-
gram.

The Group 04, superiors of the control group, evidenced
a difference at the .001 level as to their judgments of subordinates' allocations of time. This judgment coincided with the .001 level expressed in the data of Group 02 over the time periods.

Analysis of Phase II - Time Periods 4, 5, and 6 - Groups 01 and 02

Table 20 also indicates the data for the Phase II program. Here again Group 01 before the program reflected significant differences of .001 on Sections A and B of the Work Analysis Form but as a group showed no significant difference on Section C of the form.

Over time periods 5 and 6 for all 3 sections of the form, the experimental group showed significant differences at the .001 level for Sections A and B and went from no significant difference to the .001 level on time periods 5 and 6 for Section C.

Group 02, the control group for the October training program showed significant differences of .001 at all time phases of the pro-
gram on all data of the form except at the 4 week testing period when on Section C the significant difference went from the .001 level to no significant difference, but at the 12 week period, it again went to the .001 level.
Analysis of Data - Phase II - Time Periods 4, 5, and 6 - Groups 03 and 04

The superiors (Group 03) of the participants in the program prior to the training session at Worthington, Ohio evidenced a significant difference of .001 in their estimations of how the subordinate allocates his time. This .001 level remained constant over the four week period.

Group 04, the superiors of the control group, reflected no changes from the .001 level that they registered on all data of all sections of the form over time periods of 4, 5, and 6.

The consistency of the generally high levels of significance in the Friedman test would indicate that the managers as a whole do not have a uniform conception of the gradation of responsibilities. There appears to be no set pattern of job responsibility priorities. In other words, what may be an all important time consuming function to one manager, recruiting for example, may not be related to the time demands of another manager. The corresponding superiors of these managers preview the time allocations of the subordinates in corresponding fashion. This general non-uniform approach appears to be inherent and may be the result of a combination of factors:

1. There is a general prior recognition of the relative importance of responsibilities based upon previous management orientation and communication.
2. The responsibilities of each district manager differ in degree according to the current problems and challenges of the territory and of his agents.

3. The multiplicity of field sales managerial functions and their importance obviate any set pattern of time relegations.

Although the training programs did not seem to exert a significant influence upon the managers' time allocations to job responsibilities, this does not of itself reflect upon the effectiveness of the program. It appears that the managers already recognize that various factors, forces, effects, and relationships negate any set pattern of management activities. The Sales Management Training program, although not effecting change in activity patterns stresses, may emphasize and otherwise reinforce the quality performance of these functions.

Conclusions Drawn from the Work Analysis Form Data

1. The experimental and control groups were drawn from the same normally distributed population.

2. The Phase I experimental group evidenced no change or trend toward uniformity in ranking job activities before or after the training program.

3. Phase II experimental group evidenced no change or trend toward uniformity in ranking job activities before or after the training program.
4. The superiors of the Phase I experimental group perceived significant change in their subordinate's performance of job activities over the testing period.

Pearson Product-Moment Correlation Coefficient - Phases I and II - Group 01 - Times Periods 1-6

Pearson product-moment inter-correlations are shown on Tables 21-26 for Group 01, the experimental group for all time periods in both developmental programs. The correlation coefficients were established as being significant at the .05 and .01 levels for the population with the required degrees of freedom.

Reference to Table 21 shows that with the experimental group in the pre-training phase, education is positively correlated to the variables of representation and delegation. Time of a district sales manager is related to persuasion, role assumption and responsibility. The combined responsibility Variable 23 is related to time as a manager, representation, persuasion, role assumption and integration. Variable 24, the combined authority scale is related to representation, persuasion and integration. Variable 25, the combined delegation scale is related to delegation, representation and predictive accuracy. The number of aptitudes administered is correlated negatively with production emphasis and

---

| Variable Description | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
|----------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|
| 1 Age                | 35 | 34 | 27 | 34 | 36 | 35 | -02 | 55 | -24 | -31 | 17 | 40 | 20 | 40 | 23 | 21 | 17 | 46 | 46 | 40 | 57 | 42 | 35 | 01 | 40 |
| 2 Education          | -20 | 39 | 61b | -11 | 39 | 52 | -05 | 10 | 13 | -03 | -13 | 53 | 09 | -10 | 16 | -16 | 10A | 49 | 45 | 52 | 50 | 31 | 24 | 68b | 69 | 50 |
| 4 Sales Manager      | 47 | 29 | 23 | 68b | 33 | 08 | 62 | 14 | 25 | 45 | 32 | 48 | -06 | 24 | 11 | 78b | 56 | 54 | 65b | 49 | 56 | 11 | -51 | 19 |
| 5 Representation     | -33 | -02 | 71b | 11 | 05 | 34 | 06 | -11 | 80b | 56 | 05 | 34 | 07 | 63b | -54 | 87b | 31 | 73b | 49 | 63b | -08 | 28 | 13 |
| 6 Reconciliation      | 52 | -06 | 26 | -34 | 37 | -26 | 11 | -20 | 08 | 44 | -17 | 32 | -17 | 26 | -19 | 09 | 14 | 03 | -10 | -30 | -32 | 31 |
| 7 Tolerance Uncertainty | 34 | 36 | 53 | 23 | 28 | 43 | 54 | -39 | 51 | 16 | 01 | 68b | 49 | 43 | 82b | 65b | 28 | -52 | 39 |
| 8 Persuasion         | 67b | 51 | 30 | 31 | 03 | 77b | 69b | 52 | 31 | -17 | 20 | 28 | 12 | 40 | 43 | 38 | -27 | 32 |
| 9 Structure          | 15 | 69b | 53 | -31 | 39 | 47 | 38 | -12 | -30 | -05 | 17 | 00 | 12 | 13 | 03 | -06 | 23 |
| 10 Tolerance Freedom | 39 | 27 | 17 | 57 | 65b | 25 | -19 | 03 | 30b | 38 | 30b | 82b | 15 | 14 | 31 |
| 11 Role Assumption   | 39 | 28 | 21 | 38 | -21 | -43 | -29 | 13 | 01 | 36 | 22 | -20 | 10 | 11 | 31 |
| 12 Consideration     | 01 | 20 | 65b | -09 | -25 | -37 | 11 | -02 | 05 | 06 | -30 | -11 | -52b | -13 |
| 13 Production Emphasis | 32 | -07 | 29 | -32 | 70b | 50 | 59 | 71b | 59 | 22 | 77b | 13 | 18 |
| 14 Predictive Accuracy | 62b | 74b | 29 | 18 | 40 | 59 | 27 | 68b | 62b | 44 | 36 | 10 |
| 15 Integration       | -28 | 13 | 18 | 49 | 26 | 21 | 55 | 30 | -05 | -78b | 22 | 20 |
| 16 Superior Orientation | 25 | 14 | 03 | 66b | 05 | 18 | 61b | 20 | -03 | 42 |
| 17 Responsibility Scale 1 | -13 | -10 | 35 | -52 | 01 | 79b | -29 | -41 | 05 |
| 18 Authority Scale 1 | 20 | 32 | 11 | 26 | 18 | 84 | 37 | -03 |
| 19 Delegation Scale 1 | 47 | 82b | 85b | 24 | 57 | -38 | 20 |
| 20 Responsibility Scale 2 | 30 | 71b | 83b | -36 | -29 | 26 |
| 21 Authority Scale 2 | 76b | -09 | 71b | 06 | 29 |
| 22 Delegation Scale 2 | 18 | 60b | -34 | 38 |
| 23 Combined A Scales | 14 | -42 | 19 |
| 24 Combined B Scales | 28 |
| 25 Combined D Scales | 03 |

* The decimal point has been omitted for all entries.

a Significant at .05 level.
b Significant at .01 level.
and orientation to superiors. The volume incentive variable is related to tolerance of uncertainty.

Table 22 reflects that the experimental Group 01 in time period 2, age is correlated positively with authority, while time as a manager is related to representation, structure and integration. Variable 26, aptitude test administration is negatively correlated with reconciliation and superior orientation. The volume incentive variable is positively related to months as a manager, consideration, superior orientation but negatively related to aptitude tests administered.

Table 23 shows that education is positively related to responsibility. Months as a manager is correlated significantly with representation, persuasion and predictive accuracy. Aptitude tests administered correlates positively with delegation; and variable 27, volume incentive relates positively to initiating structure and consideration.

Table 24 shows that for the experimental group in the Phase II program, age is correlated significantly with volume incentive. Months as an agent is related to delegation scales. Months as a sales manager is related to tolerance for uncertainty. There appears to be interesting significant inter-correlations between reconciliation, and persuasion, structure, role assumption, production emphasis, integration and superior orientation. Tolerance for uncertainty is related to integration. Persuasion is significantly
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Note: The decimal point has been omitted for all entries.
a Significant at .05 level.
b Significant at .01 level.
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*The decimal point has been omitted for all entries.
a Significant at .05 level.
b Significant at .01 level.
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<td>44 -02 50b 12 07 30 -19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Responsibility Scale 2</td>
<td>12 43 93b 38 06 28</td>
<td>19 21 22 23 24 25 26 27</td>
<td>12 43 93b 38 06 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 Authority Scale 2</td>
<td>04 19 85b -19 29</td>
<td>19 21 22 23 24 25 26 27</td>
<td>04 19 85b -19 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Delegation Scale 2</td>
<td>46 13 43 -26</td>
<td>19 21 22 23 24 25 26 27</td>
<td>46 13 43 -26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 Combined R Scales</td>
<td>-19 -01 40</td>
<td>19 21 22 23 24 25 26 27</td>
<td>-19 -01 40</td>
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</tr>
<tr>
<td>24 Combined A Scales</td>
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<td>19 21 22 23 24 25 26 27</td>
<td>47a -04 19</td>
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<tr>
<td>25 Combined D Scales</td>
<td>-17</td>
<td>19 21 22 23 24 25 26 27</td>
<td>-17</td>
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</tr>
<tr>
<td>26 Aptitude Tests Administered</td>
<td></td>
<td>19 21 22 23 24 25 26 27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
related to structure, role assumption, production emphasis, predictive accuracy, integration and superior orientation. Variable 10, Tolerance for Freedom is positively correlated with role assumption, production emphasis, predictive accuracy, integration and superior orientation. Variable 12, consideration, is related to production emphasis, integration and superior orientation.

Production emphasis is related to integration and authority, and predictive accuracy is related to integration. Integration is positively related to superior orientation and to the authority scales. Responsibility is related to authority while authority is significantly related to the combined responsibility scales. The combined responsibility scales are related to the combined authority scales, and the combined authority scales are related to the combined delegation scales.

This same Group 01 in Time Period 2 (Table 25), however, showed a significant positive correlation between education and representation and a negative relationship with responsibility. Age again is positively related to volume incentive. Other significant positive inter-correlations are tolerance for uncertainty to structure and integration. Persuasion, by the same token, is related to production emphasis, predictive accuracy and superior orientation. Persuasion is negatively correlated with authority.
<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Variable Number</th>
<th>Variable Number</th>
<th>Variable Number</th>
<th>Variable Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Age</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2 Education</td>
<td>-16 -12 31 a -05 06 -04 10 -18 30 02 21 03 29 07 -30 -14 03 -33 -37 -30 -24 -37 -18 06</td>
<td></td>
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<tr>
<td>3 Months as Agent</td>
<td>17 -10 40 36 14 05 -21 -24 20 12 16 -01 26 -04 -25 -21 05 04 -13 00 -10 -13 21 09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Months as District</td>
<td>-30 04 -14 -08 09 15 -20 35 -22 -06 -25 -02 40 -12 -41 16 07 -11 33 -01 -32 -08 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Reconciliation</td>
<td>06 32 40 -43 41 35 40 31 35 23 05 -18 -20 08 -27 -15 08 -28 -26 -24 -17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Tolerance Uncertainty</td>
<td>07 57 a 03 25 33 23 41 63 b 36 05 -17 -32 -26 03 25 -11 -07 05 09 17</td>
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<td>8 Persuasion</td>
<td>34 -30 22 07 50 a 58 a 13 61 b 21 -40 a -02 29 -06 -17 30 -29 -26 18 -28</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9 Structure</td>
<td>-36 60 b 39 39 62 b 60 b 40 b 21 -22 -38 01 -10 -16 13 -18 -35 -27 -17</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10 Tolerance Freedom</td>
<td>04 -20 01 -59 -40 -50 16 32 -06 -04 21 16 07 32 27 53 a -08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Role Assumption</td>
<td>-13 55 a 21 36 23 27 08 -27 23 16 -19 31 24 -36 09 -29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Consideration</td>
<td>08 25 50 a -08 -17 -50 a -12 -43 -60 b 24 -35 -74 b -03 -46 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Production Emphasis</td>
<td>34 18 19 -08 -14 -22 11 -03 -09 02 -09 -22 19 -41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Predictive Accuracy</td>
<td>46 68 b 11 -45 -28 15 -15 -08 16 -33 -29 -17 00</td>
<td></td>
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<tr>
<td>15 Integration</td>
<td>21 06 -33 -09 -23 -34 13 -09 -40 -04 -57 a 15</td>
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<tr>
<td>16 Superior Orientation</td>
<td>19 -20 -33 35 00 -47 a 32 -11 -58 a 03 -10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Responsibility Scale 1</td>
<td>17 -11 40 39 -03 65 b 34 -13 07 -13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Authority Scale 1</td>
<td>-02 44 43 -09 36 81 b 03 06 -13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Delegation Scale 1</td>
<td>-23 -24 12 -12 -17 41 03 -30</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20 Responsibility Scale 2</td>
<td>35 -39 81 b 47 a -35 -04 -03</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>21 Authority Scale 2</td>
<td>00 03 88 b 06 57 a -07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Delegation Scale 2</td>
<td>-22 -03 80 b 12 -26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 Combined R Scales</td>
<td>17 a -26 02 -10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 Combined A Scales</td>
<td>07 40 -10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 Combined D Scales</td>
<td>07 31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 Aptitude Tests Administered</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>27 DSM Volume Incentive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Decimal point has been omitted for all entries.
b Significant at .05 level.
c Significant at .01 level.
Structure is related to role assumption, predictive accuracy, integration and superior orientation and negatively related to authority. Tolerance for freedom is related to role assumption, predictive accuracy, integration and superior orientation. Role assumption is positively related to aptitude tests administered. Consideration is related to production emphasis. Production emphasis is positively related to integration but negatively related to the authority scales. Predictive accuracy is correlated with superior orientation, and superior orientation with aptitude tests administered. Responsibility on the other hand, is negatively related to one delegation scale but positively related to the combined delegation scales. Authority is related to the combined authority scale and to aptitude tests administered. The combined responsibility scales are significantly correlated to the combined authority scales.

Finally, Table 26 shows that age is relative to responsibility. Education is negatively related to responsibility. Months as a sales manager is related to representation and tolerance for uncertainty. Reconciliation is related to persuasion, structure, role assumption and superior orientation, and tolerance for uncertainty is related to structure, integration and superior orientation. Persuasion is related to role assumption and to integration. Structure is related to role assumption, integration and responsibility. Tolerance for freedom is related to authority and delegation.
### Table 26

**Correlational Matrix of Twenty-Seven Variables Phase II, Group 01, Time Period 6 (N=86)**

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Variable Number</th>
<th>Variable Number</th>
<th>Variable Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Age</td>
<td>-1.1  -2.6  -1.4</td>
<td>-1.1  0.1  24.4</td>
<td>-0.9  -0.6  -2.5</td>
</tr>
<tr>
<td>2 Education</td>
<td>-1.6  -4.2  -3.7</td>
<td>-0.4  15.4  0.4</td>
<td>-0.8  -0.27  -0.6</td>
</tr>
<tr>
<td>3 Months as Agent</td>
<td>17.8  -6.5  20.1</td>
<td>-0.8  -0.6  1.0</td>
<td>-0.5  -1.4  0.1</td>
</tr>
<tr>
<td>Months as District</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Sales Manager</td>
<td>-58.8  -1.1  -5.9</td>
<td>0.5  11.0  11.7</td>
<td>0.0  26.3  -3.1</td>
</tr>
<tr>
<td>5 Representation</td>
<td>-1.5  0.8  -0.2</td>
<td>-0.3  1.6  -2.3</td>
<td>3.1  -3.3  1.3</td>
</tr>
<tr>
<td>6 Reconciliation</td>
<td>27.5  52.6  0.4</td>
<td>63.0  0.4  32.5</td>
<td>34.9  50.8  10.0</td>
</tr>
<tr>
<td>7 Tolerance Uncertainty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Persuasion</td>
<td>24.1  62.6  -1.6</td>
<td>34.1  15.6  40.0</td>
<td>30.5  59.8  51.8</td>
</tr>
<tr>
<td>9 Structure</td>
<td>34.1  11.4  7.6</td>
<td>06.1  4.5  0.7</td>
<td>69.2  28.0  03.1</td>
</tr>
<tr>
<td>10 Tolerance Freedom</td>
<td>-10.6  63.1  11.2</td>
<td>21.3  31.1  51.8</td>
<td>55.8  01.0  0.10</td>
</tr>
<tr>
<td>11 Role Assumption</td>
<td>-0.8  -0.2  -1.7</td>
<td>-0.07  -31.0</td>
<td>11.1  69.2  13.7</td>
</tr>
<tr>
<td>12 Consideration</td>
<td>20.4  43.0  07.0</td>
<td>39.8  42.0  09.2</td>
<td>22.0  03.0  0.9</td>
</tr>
<tr>
<td>13 Production Emphasis</td>
<td>04.0  20.4  43.0</td>
<td>-22.32  -40.0</td>
<td>11.3  -34.4  -43.0</td>
</tr>
<tr>
<td>14 Predictive Accuracy</td>
<td>04.0  37.2  21.4</td>
<td>01.0  -18.4</td>
<td>22.2  -22.20</td>
</tr>
<tr>
<td>15 Integration</td>
<td>22.9  59.6  00.0</td>
<td>-15.0  02.0</td>
<td>18.0  17.0</td>
</tr>
<tr>
<td>16 Superior Orientation</td>
<td>15.10  09.0</td>
<td>10.33  -33.45</td>
<td>4.5  19.1</td>
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<td>1.53  00.0  08.29</td>
<td>29.25  12.18</td>
<td>23.62  30.88</td>
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<td>18 Authority Scale 1</td>
<td>13.35  50.90</td>
<td>-04.38  86.83</td>
<td>38.09  02.0</td>
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<td>19 Delegation Scale 1</td>
<td>-25.16  6.9</td>
<td>-08.25  0.8</td>
<td>29.3  0.8</td>
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<tr>
<td>20 Responsibility Scale 2</td>
<td>33.23  8.6</td>
<td>20.27  34.23</td>
<td>79.31  2.12</td>
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<td>21 Authority Scale 2</td>
<td>30.00  02.25</td>
<td>-08.22  02.08</td>
<td>24.12  03.0</td>
</tr>
<tr>
<td>22 Delegation Scale 2</td>
<td>30.00  02.25</td>
<td>-08.22  02.08</td>
<td>24.12  03.0</td>
</tr>
<tr>
<td>23 Combined R Scales</td>
<td>35.12  8.5</td>
<td>-29.11  0.8</td>
<td>29.3  0.8</td>
</tr>
<tr>
<td>24 Combined A Scales</td>
<td>30.00  02.25</td>
<td>-08.22  02.08</td>
<td>24.12  03.0</td>
</tr>
<tr>
<td>25 Combined D Scales</td>
<td>30.00  02.25</td>
<td>-08.22  02.08</td>
<td>24.12  03.0</td>
</tr>
<tr>
<td>26 Aptitude Tests Administered</td>
<td>30.00  02.25</td>
<td>-08.22  02.08</td>
<td>24.12  03.0</td>
</tr>
<tr>
<td>27 DSM Volume Incentive</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The decimal point has been omitted for all entries.

a Significant at .05 level.
b Significant at .01 level.
Consideration is related to integration and integration to superior orientation and superior orientation to authority, with a negative correlation with the number of aptitude tests administered. The RAD scales show a positive inter-correlation between responsibility and authority and delegation. The combined delegation scale relates negatively to aptitude tests administered.

A summary of the Pearson Product-moment inter-correlations indicate that:

1. Phase I group shows a moderate relationship between initiating structure and consideration over the time periods while the Phase II group does not.

2. Age in the Phase I group is related to authority more significantly over time periods 2 and 3.

3. Education in the Phase I group is related to delegation and responsibility over time. This does not occur in the Phase II group.

4. The manager's volume incentive is significantly related to consideration over time periods 2 and 3 for Phase I but not Phase II.

5. The number of aptitude tests is not related to responsibility, production emphasis and volume incentive in either phase.

6. The length of time as an agent is not significantly correlated with production emphasis and is negatively correlated with the manager's volume incentive in both experimental groups.

7. The length of time as a manager is not significantly correlated with production emphasis.
Application of Data to the Null Hypotheses

To test the null hypothesis that the immediate superior of the manager will not observe a significant change in his leadership behavior, the means and standard deviations and the Kruskal-Wallis nonparametric test were employed on the LBDQ variables between groups and between time periods. Additionally, as another measure, the Pearson product-moment correlation coefficients were determined for the experimental groups over the testing period. The findings were found to be significant enough to reject this null hypothesis.

To test the second null hypothesis that the immediate superior of the participating manager will perceive no significant change in the pattern of manager functions exhibited by the executive, the means and standard deviations and the Kruskal-Wallis analysis of variance were employed between groups and between time periods data on the responsibility, authority and delegation scales. The Friedman two-way analysis of variance was employed on the Work Analysis Form data between time periods, as another test, Pearson product-moment correlation coefficients were also developed for the RAD scale variables. The findings were conclusive enough to reject the null hypothesis.

To test the third null hypothesis that the executive himself will perceive no significant change in the exercise of major
functional responsibility the means and standard deviations and the Kruskal-Wallis were employed on the between groups and between time periods data for the RAD scales and to the recruiting activity variables. The Friedman test was applied to the WAF mean scores by time period to time period. As a further test, Pearson product-moment correlation coefficient were developed on the pertinent variables for the experimental group. The overall results do not suggest a rejection of this hypothesis.

To test the fourth null hypothesis that the executive himself will perceive no significant change in his leadership behavior, the means and standard deviations and the Kruskal-Wallis were applied to the 12 variables of the LBDQ sub-scales, both by groups and by time periods. Again, as an additional testing instrument the Pearson product-moment correlations coefficients were developed for possible correlation of the variables over time. The overall evidence does not support a rejection of this hypothesis.

To test the fifth null hypothesis that the subordinates of the participating manager will exhibit no significant change in sales call activity, production and income, as a result of the manager's participation in the program, the following procedure was employed:

1. The subordinate's production was accumulated for the controlled time periods and transposed to a composite premium index.
2. The manager's incentive compensation for agency production during the time periods was developed.

These variables were included in the Kruskal-Wallis analyses, and the means and standard deviations were developed.

As a final measurement, the "t" test for the differences of means between independent and correlated samples was constructed. The evidence suggested that this null hypothesis could not be rejected.

**Analysis of Composite Premium Index Data**

It was null hypothesized that the subordinate would evidence no significant change in his insurance production as the result of the manager's participation in the developmental program.

To test this hypothesis, a composite premium factor was established for the controlled testing time periods before and after the program. Means and standard deviations were computed for the data and then the "t" test was applied to determine the difference between the means of the groups over the testing time periods.

The "t" test was employed in this specific analysis because, as a parametric test it is most likely to reject the \( H_0 \) when it is false.\(^5\) Also, the "t" test assumes normally distributed populations as well as the use of independent samples in the study. It was felt that the data satisfied these conditions.

Table 27 displays the means and standard deviations by time periods for the groups. Table 28 gives the "t" test scores for the significant differences between uncorrelated means. In Phase I there is no significant difference between the means of the groups for time periods 1 and 2. There was a significant difference between the means for the groups from time period 2 to 3 for the May experimental group.

However, in Phase II, the October program there was significant negative differences between the means of the groups for time periods 5 and 6. This suggests that the May development program evidenced performance change in the agent's production whereas the October program reflected a negative variance.

A plausible explanation for the greater variance in both phases by the experimental group might be that as a result of training, Phase I managers (pre-program low producers) now trend toward increased district production, and the Phase II managers (pre-program high producer) now disperse their efforts into other areas of management. Another possible influential factor with the Phase II group might be the influence of seasonal depreciation of production at year end.

A possible limitation in the accumulation of production data might be reflected here in that there is a time lage in agent's
<table>
<thead>
<tr>
<th>Phase No.</th>
<th>Time Period</th>
<th>Group 01 (N = 11)</th>
<th>Group 02 (N = 19)</th>
</tr>
</thead>
<tbody>
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<td>17,639, 6,805</td>
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<td>2</td>
<td>18,513, 7,275</td>
<td>17,322, 7,029</td>
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<tr>
<td></td>
<td>3</td>
<td>19,553, 6,304</td>
<td>15,951, 7,879</td>
</tr>
<tr>
<td>II</td>
<td>4</td>
<td>15,715, 8,889</td>
<td>15,684, 7,260</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>15,433, 7,912</td>
<td>20,413, 9,543</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>13,515, 4,698</td>
<td>16,302, 5,904</td>
</tr>
</tbody>
</table>
### TABLE 28

**COMPOSITE PREMIUM INDEX "T" TEST SCORES FOR DIFFERENCES BETWEEN UNCORRELATED MEANS GROUPS 01 AND 02**

<table>
<thead>
<tr>
<th>Phase No.</th>
<th>Time Period</th>
<th>Group 01 (N = 11)</th>
<th>Group 02 (N = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>.250</td>
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</tr>
<tr>
<td></td>
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<td></td>
<td>3</td>
<td>1.366*</td>
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<td></td>
<td>(N - 18)</td>
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<tr>
<td>4</td>
<td>.012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.497*</td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td>1.371*</td>
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</tr>
</tbody>
</table>

*Significant at the .10 but less than .05 level.*
production from the sale to the reporting and recording phase. In other words, sampling measurements might require intervals of a longer duration than the 4 and 12 weeks employed in this study.
CHAPTER VIII
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Scope of Study

Appraising the effectiveness of management development programs is recognized as a most difficult task. Determining quantitative results through the use of qualified testing instruments is not an easy assignment. Consequently, not much effort by business is directed toward this activity. However, if management development programs such as was described in this study, are to be improved and if they are to be utilized effectively by the organization as a developmental technique then proper and continuous evaluation is necessary.

The present study has attempted to determine the effectiveness of a sales management development program conducted by the Office of Marketing at the Nationwide Insurance Companies. Effectiveness has been defined principally in terms of the influence of the training program upon the managerial behavior of its participants. Of particular interest in this study was a determination of the effects of the program upon the on-the-job performance
of the managers in their inter-relationships with their supervisors and agents.

The researcher was fortunate in obtaining the fullest cooperation of Nationwide's Office of Marketing in his evaluation efforts. The developmental programs studied were conducted at Green Meadows Management Center, Worthington, Ohio, during the weeks of May 16-19 and October 3-7, 1966. The program officially known as the Basic School in Sales Management is generally held three to four times annually for newly appointed District Sales Managers. The objectives and content of these programs, although not standardized in the actual sense, are nevertheless structured around the managerial and functional responsibilities of the District Sales Manager in his role with the Nationwide Insurance Companies.

Methods and Limitations of the Study

Quantitative data on the influence of the program were obtained through the use of questionnaires completed over a three month period by the participants in the study and by the accumulation of quantitative data on insurance sales, recruiting activity, and incentive compensation.

The method employed in this research was essentially a before and after study of two groups of managers. One group
(the experimental group) was exposed to a developmental program while the other group (the control group) was not subjected to the program. All of the data, except the initial questionnaires administered to the experimental groups were collected by mail questionnaires.

Correspondingly, questionnaires were mailed to the superiors of both the experimental and control groups.

The researcher attended and also participated in the developmental program. At four and twelve week periods after the program, sets of questionnaires were sent to all the respondents in the program. Concurrently, data relating to the manager's recruiting activities, his incentive income and the production of his agents were accumulated for controlled periods before and after the program.

It was felt that because of the intra-company nature of the study, its support by the Office of Marketing and the rapport established and existing with the participants that the data represents a qualified contribution by the respondents. It was determined that the testing instruments were valid for the purposes of this study.

Conclusions

The evidence established by the research design and the approach used in this study supports the null hypothesis that no
definite pattern of significant change in the leadership behavior of
the managers materialized as a result of the developmental pro-
gram. The inability to reject the hypothesis however, does not
altogether prove the invalidity of the program in effecting change.
A different research design, or longer intervals between testing
periods, or larger populations might more demonstrably reject the
hypothesis relative to managerial behavior.

Although the study has produced results that are largely
negative in terms of a particular developmental program upon its
participants, it nevertheless has developed a pragmatic approach
to evaluation utilizing qualified instruments within the framework of
a workable research design that can be employed in continuing
and further studies.

Summary of Conclusions Drawn from Analyses
of Data from the Phase I Program

1. The pre-training experimental and control groups were
drawn from the same population.

2. The difference between Groups 01 and 02 over the
testing periods was significant on one leader behavior variable,
role assumption, and this difference was evident in all three periods.

3. There was no significant difference in the recruiting
activity variable over the twelve week period.
4. There was no significant difference in the managers' volume incentive (commission) over the twelve week period.

5. The superiors of Phase I managers observed significant change in leader behavior and in responsibility, authority and delegation scales.

6. The experimental group did not differ significantly from the control group in time allocations to activities except on one section. This difference disappeared over time.

7. The superiors of the manager perceived significant change in their estimations of subordinate's time allocations to responsibility.

**Summary of Conclusions Drawn from the Phase II Program**

1. The pre-training program experimental and control groups were drawn from the same population.

2. There were significant differences in relationships between the experimental and control groups on 4 variables at the .05 level over the 12 week period. These were persuasion, role assumption, superior orientation, and combined responsibility.

3. There was no significant change in the recruiting activity of the managers over the twelve week period.

4. The experimental managers self-description is significantly different from their superior's description of the manager's behavior.
5. There was no significant difference in the number of aptitude tests administered over the testing period as a result of the training program.

6. There was a significant difference on the number of agents licensed but this difference also appeared in the control group data.

7. There was no significant difference in the incentive compensation of the experimental group over the testing period as a result of the program.

Additional Conclusions

1. The managers of both the experimental and control groups of both phases perceived overall significant differences in leader behavior, responsibility, and authority when their scores were related to their superiors. This was particularly evident on the initiating structure and consideration variables.

2. The superiors of the experimental and control groups of both phases evidenced significant differences as to their estimations of the subordinates' time allocations to activities.

This phenomenon was particularly evident with the variable of consultative time, in which the superior sees himself allocating more consultative time to his subordinate on personnel and technical matters than the subordinate himself perceives.
3. The managers as a group, based on the interpretation of the Friedman test applied to the Work Analysis Form data, reflect a managerial group that is flexible, non-stereotyped in its approach to management tasks, and seemingly adaptable to the changing and shifting functional demands of the position.

4. There was a moderately significant difference between the means of both groups of Phase I on the production variable. There was a negative variance between the means of the groups in Phase II. In either case, the null hypothesis was not rejected. Since the difference in both groups was less than .10, but more than .05, it was felt there was not enough justification for reasonable rejection of the hypothesis.

5. Since the null hypothesis on significant change in managerial behavior was not rejected as a result of the program, it was impossible to either validate or reject the opinion that some management development programs have a tendency to create initial impetus in change that distinctly dissipates progressively over time.

6. A final conclusion is this. Although this study has not solved the problem of management development education, it is felt that it may have contributed toward the development of an approach toward the quantitative evaluation of developmental programs.
In summary, if the models used were correct and if the measurement requirement was satisfied then the conclusions that were enumerated are consequential in this study.

Recommendations

Having reviewed the experiment, the data and the effects of the program upon the variables, and having summarized conclusions based upon these effects, it is pertinent and germane to offer recommendations which may assist Nationwide's Office of Marketing and also other researchers in the field of management development.

1. The Office of Marketing, Department of Sales Manpower Development should install pre-program and post-program evaluative measurements as an integral phase of its overall Basic School Sales Management.

2. Quantitative evaluations employing measurements such as those performed in this study should be employed with the participating managers at periodic intervals, beyond the four week and twelve week testing periods utilized in this program to determine the long range effects of development.

3. Continuing and more frequent developmental programs for managers should be instituted. On the basis of this study, a singular initial management program does not appear influential in degree to effect overall desirable changes in leadership behavior or managerial skill performance.
4. The objectives for each of the recommended sequential programs should be most deliberately structured for each program. The content of the program should be controlled, geared to, and tested against such objectives.

5. The developmental programs although being sequential should concentrate more intensively and largely on key managerial and functional responsibilities of the manager's job if significant change is to be accomplished in the exercise of functional responsibilities.

6. Further research is decidedly necessary in the area of Regional Sales Manager--District Sales Manager relationships. The study conclusively demonstrated significant disparity between supervisor-subordinate evaluations of leadership behavior and performance. This research should extend into the development and application of meaningful management performance audits conducted on a regular continuing basis to insure unanimity of understanding.

7. Further study in the same area of Regional Sales Manager relationships needs to focus on the problems resulting from the physical separation of the superior and subordinate. Problems as disparity in the perceptions of time allocations to responsibilities and functions need particular attention.
8. Since the disparity between the superior and subordinate seems to stem from physical separation, more thought and study should be devoted toward organizational and geographical modifications that would effect more proximate relationships in the line management structure.

9. Sales Management Development should be stressed as a line responsibility and not the exclusive responsibility of the Department of Marketing Manpower Staff. In this respect, more emphatic concentration and orientation of this responsibility should be directed to the top line management of the field.

10. Whenever possible, the Department of Marketing Manpower should orient the field line sales management to the objectives, policies, content, and direction of the Home Office Schools so that there is continual field follow-up and evaluation of the program.

In addition to the above recommendations, the following research recommendations are offered for the future.

1. Additional study should be conducted to determine the types of controls which can be installed to ensure that field sales management performance is consistent with the principles, policies, and practices discussed at the management program.
2. Additional research remains in the area of leadership within the organization. Implied is the need for positive identification and determination of those elements incidental to effective organizational climate for leadership development as a personal qualification rather than an organizational by-product.

3. Additional research should be carried on in the use and application of The Ohio State Personnel Research Board Studies within organizations. This study indicated the adaptability of these studies, with modifications, to field sales management. Further research will result in not only wider accumulation of data but also more definitive applications of the measurements.

In conclusion, the researcher feels he cannot conclude this effort without a nod of appreciation to the many people who helped make it possible through the liberal use of advice, time, and in the case of the Office of Marketing, budgetary assistance. This has been an engrossing, stimulating study certainly worthy of continued effort and research.
NATIONWIDE INSURANCE
1966

BASIC SCHOOL IN SALES MANAGEMENT

Green Meadows
Worthington, Ohio

Sunday
May 15, 1966

6:30 P.M.
Welcome Buffet
Recreation Room
Management Center
Chairman: Dale Hill

8:30 - 9:00  WELCOME AND ORIENTATION  Jack Dick

9:00 - 10:00  YOU AND YOUR JOB  Ted Charles

10:00 - 10:15  BREAK  

10:15 - 12:00  YOU AND YOUR JOB (CONTINUED)  Ted Charles

12:00 - 1:15  LUNCH  

1:15 - 2:30  RECRUITING INTRODUCTION  Dick Carr

2:30 - 2:40  BREAK  

2:40 - 3:45  BUILDING A RECRUITING PLAN  Dale Hill

3:45 - 4:00  BREAK  

4:00 - 5:30  PROSPECTING TO RECRUIT  Jack Dick
              Dick Carr
              Ted Charles
              Dale Hill

5:30 - 6:00  MANAGEMENT CONFERENCE  Ted Charles
Tuesday, May 17, 1966

7:45  GROUP BREAKFAST - DELAWARE ROOM

9:00  ON THE LINE

1:00 - 2:15  RECRUITING CRITIQUE AND TELEPHONE DRILL  Dale Hill

2:15 - 2:30  BREAK

2:30 - 3:30  FIRST SELL-SELECT INTERVIEW  Bernie Deitzer
             Curt Moore

3:30 - 3:45  BREAK

3:45 - 5:00  SECOND SELL-SELECT INTERVIEW  Bernie Deitzer
             Don Godfrey

5:00 - 5:30  RECRUITING CONFERENCE  Dick Carr
### Wednesday, May 18, 1966

**Chairman:** George Mazzanti

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:15</td>
<td>PRINCIPLES OF TRAINING</td>
<td>Agent Training Staff</td>
</tr>
<tr>
<td>9:15 - 9:25</td>
<td>BREAK</td>
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<tr>
<td>9:25 - 10:15</td>
<td>TRAINING FORMULA</td>
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<tr>
<td>10:15 - 10:30</td>
<td>BREAK</td>
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<tr>
<td>10:30 - 11:15</td>
<td>TRAINING TECHNIQUES AND TOOLS</td>
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<td>11:15 - 12:00</td>
<td>PRE-CONTRACT TRAINING</td>
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<tr>
<td>12:00 - 1:15</td>
<td>LUNCH</td>
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<tr>
<td>1:15 - 3:15</td>
<td>TRAINING IN ACTION</td>
<td>George Mazzanti</td>
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<td>3:15 - 3:30</td>
<td>BREAK</td>
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<tr>
<td>3:30 - 4:30</td>
<td>TRAINING IN ACTION (CONTINUED)</td>
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<td>4:30 - 5:00</td>
<td>TRAINING CONFERENCE</td>
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<tr>
<td>6:30</td>
<td>GROUP DINNER</td>
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<td></td>
<td>DELAWARE ROOM</td>
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<td></td>
<td>GREEN MEADOWS</td>
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</tbody>
</table>
Thursday, May 19, 1966
Chairman: Ted Charles

8:30 - 9:15  INTRODUCTION TO SUPERVISION  Jack Dick
9:15 - 9:30  BREAK
9:30 - 10:15 THE BASIS OF EFFECTIVE SUPERVISION  George Frink
10:15 - 11:00 PROBLEM IDENTIFICATION  Herb Bowman
11:00 - 11:10 BREAK
11:10 - 11:50 PROBLEM SOLVING THROUGH SUPERVISION  Clint Lefler
11:50 - 12:00 SCHOOL PICTURE
12:00 - 1:15 LUNCH
1:15 - 2:00 THE PRINCIPLES OF FINANCING  Herb Bowman
2:00 - 3:00 ADMINISTERING THE FINANCE PLAN  Hal Gall
3:00 - 3:15 BREAK
3:15 - 4:30 SUPERVISING THE FINANCE PLAN  Dick Carr
4:30 - 5:00 SUPERVISION CONFERENCE  Jack Dick
Friday, May 20, 1966
Chairman: Dale Hill

8:30 - 8:45  MEET "THE MAN"        Dale Hill
8:45 - 9:45  TIME MANAGEMENT        Bob Hardesty
9:45 - 10:15 BREAK — DISCUSSION    Bob Hardesty
10:15 - 11:15 MANAGING FOR RESULTS Bob Hardesty
11:15 - 11:30 BREAK
11:30 - 12:00 "XL" IN "66"          Ed Coughlin

ADJOURN
NATIONWIDE INSURANCE

1966

BASIC SCHOOL IN SALES MANAGEMENT

Green Meadows
Worthington, Ohio

Sunday
October 2, 1966.

6:30 p.m.

Welcome Buffet
Recreation Room
Management Center
Monday - October 3, 1966

Chairman: Dale Hill

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Instructor(s)</th>
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<tbody>
<tr>
<td>8:15 - 8:45</td>
<td>WELCOME AND ORIENTATION</td>
<td>Jack Dick</td>
</tr>
<tr>
<td>8:45 - 10:15</td>
<td>PRINCIPLES AND FUNCTIONS OF MANAGEMENT</td>
<td>Bill Swank</td>
</tr>
<tr>
<td>10:15 - 10:30</td>
<td>BREAK</td>
<td></td>
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<tr>
<td>10:30 - 12:00</td>
<td>GETTING RESULTS THROUGH PEOPLE</td>
<td>Ted Charles</td>
</tr>
<tr>
<td>12:00 - 1:15</td>
<td>LUNCH</td>
<td></td>
</tr>
<tr>
<td>1:15 - 2:30</td>
<td>RECRUITING INTRODUCTION</td>
<td>Dick Carr</td>
</tr>
<tr>
<td>2:30 - 2:40</td>
<td>BREAK</td>
<td></td>
</tr>
<tr>
<td>2:40 - 3:45</td>
<td>BUILDING A RECRUITING PLAN</td>
<td>Dick Carr</td>
</tr>
<tr>
<td>3:45 - 4:00</td>
<td>BREAK</td>
<td></td>
</tr>
<tr>
<td>4:00 - 5:30</td>
<td>PROSPECTING TO RECRUIT</td>
<td>Jack Dick, Dick Carr, Ted Charles, Dale Hill, Bill Swank</td>
</tr>
</tbody>
</table>
Tuesday - October 4, 1966

7:45  GROUP BREAKFAST
      Delaware Room

9:00  ON THE LINE

1:00 - 1:30  RECRUITING RESULTS
            Conference Room A  Dale Hill

1:30 - 3:00  SELL-SELECT CONFERENCE
            Jack Dick
            Dick Carr
            Dale Hill
            Ted Charles
            Bill Swank

3:00 - 3:15  BREAK

3:15 - 4:45  CONTINUATION OF SELL-SELECT CONFERENCE

4:50 - 5:30  SALESMAHSHIP - A REWARDING CAREER
            Conference Room A
Wednesday - October 5, 1966
Chairman: George Mazzanti

8:30 - 9:15 PRINCIPLES OF TRAINING  Agent Training Staff
9:15 - 9:25 BREAK
9:25 - 10:15 TRAINING FORMULA
10:15 - 10:30 BREAK
10:30 - 11:15 TRAINING TECHNIQUES AND TOOLS
11:15 - 12:00 PRE-CONTRACT TRAINING
12:00 - 1:15 LUNCH
1:15 - 3:15 TRAINING IN ACTION
3:15 - 3:30 BREAK
3:30 - 4:30 TRAINING IN ACTION (CONTINUED)
4:30 - 5:00 TRAINING CONFERENCE  George Mazzanti

6:30 p.m.
Informal Cook-out
Patio and Little Brown Jug Room
Green Meadows
Thursday - October 6, 1966

General Board Conference Room
7th Floor - Home Office

Chairman: Ted Charles

8:30 - 9:30 INTRODUCTION TO SUPERVISION Jack Dick

9:30 - 9:45 BREAK

9:45 - 10:30 PROBLEM IDENTIFICATION Herb Bowman

10:30 - 11:15 PROBLEM SOLVING THROUGH SUPERVISION Clint Lefler

11:15 - 12:15 TOUR

12:15 - 1:15 LUNCH

1:15 - 2:00 THE PRINCIPLES OF FINANCING Herb Bowman

2:00 - 3:00 ADMINISTERING THE FINANCE PLAN Hal Gall

3:00 - 3:25 BREAK

3:25 - 4:30 SUPERVISING THE FINANCE PLAN Dick Carr

4:30 - 5:00 SUPERVISION CONFERENCE Jack Dick
Friday - October 7, 1966

Chairman: Dale Hill

8:30 - 8:45 MEET "THE MAN"  Dale Hill
8:45 - 9:45 TIME MANAGEMENT  Bob Hardesty
9:45 - 10:15 BREAK - DISCUSSION
10:15 - 11:15 MANAGING FOR RESULTS  Bob Hardesty
11:15 - 11:30 BREAK
11:30 - 12:00 "XL" IN "66"  Ed Coughlin

ADJOURN
BIOGRAPHICAL SKETCH
Insurance Leadership Research Study

1. Name ________________________________

2. Sales Region ________________________

3. Marital Status __________ Date __________

4. Birth Place ________________ Birth Date ______

Education

5. High School ______________________________________

6. College __________________________________________

7. Other Advanced Education ______________________________________

8. College Major or Specialized Training Field ______________________________________

9. Major Occupation (before Nationwide Insurance)
   Job Title ____________________________ Type of Work ____________________________ Years
   ____________________________________________

10. Military Service ______________________ Type of Work ______

11. First Agent's License Date with Nationwide Insurance ____________________________

12. Started as Career Agent ____________________________

13. Started as District Sales Manager ____________________________
    As Regional Sales Manager ____________________________

14. Other Nationwide Insurance Positions ____________________________
    Title ________________ Date ________________

15. Number of agents supervised ________
    Number of DSM's supervised __________
BIOGRAPHICAL SKETCH
Insurance Leadership Research Study

1. Name

2. Sales Region

3. Marital Status Date

4. Birth Place Birth Date

Educational Background

5. High School

6. College

7. Other Advanced Education

8. College Major or Specialized Training Field

9. Major Occupation (before Nationwide Insurance)
   Job Title Type of Work Years

   

Military Service

10. Type of Work

11. First Agent's License Date with Nationwide Insurance

12. Started as Career Agent

13. Started as District Sales Manager As Regional Sales Manager

14. Other Nationwide Insurance Positions
   Title Date

15. Number of agents supervised

   Number of DSM's supervised
To: District Sales Manager

From: Edmond Coughlin
Director of Sales Manpower Development

Re: Management Development

One of our foremost objectives here in Marketing Staff is a continuous study of our management development activities involving field sales management.

Therefore as a participant in this Sales Management program we would like your cooperation in a scientific study of leadership behavior patterns of managers in the insurance industry.

This scientific research program will be conducted by Mr. Bernard Deitzer, an employee of these Companies and also a part-time graduate student in management at The Ohio State University. Mr. Deitzer will employ methods developed by The Ohio State Personnel Research Board to describe objectively the managerial behavior of persons in leadership positions.

We have assured Mr. Deitzer of our support in this independent objective study which could make a valuable contribution to the study of management development in the Office of Marketing and in the insurance industry.

It will simply mean that you are asked to complete a set of questionnaires at different time intervals. The procedure will require little time and all material will be treated confidentially by Mr. Deitzer in this independent research study.

This is not a test but a measurement of managerial behavior. There are no right or wrong answers. All we require is your honest direct opinion. Your responses along with those of other District Sales Managers will be tabulated by IBM equipment.

There are sections to this study. Each section has its own directions. It is important to read these directions most carefully. When you have completed your responses to these forms, return them in the enclosed pre-paid, self-addressed envelope.

In the near future, two additional sets of these forms will be mailed to you.

Again, your answers will be treated confidentially.

Your cooperation is most appreciated.

EC DSM EG
To: District Sales Manager

From: Bernard A. Deitzer

Re: Management Development Research Study

October 5, 1966

Earlier, Ed Coughlin wrote you about the management development study being conducted. We appreciate your cooperation and participation in this scientific study designed to obtain an analysis of leadership in the insurance industry.

This is not a test but a measurement of managerial behavior. There are no right or wrong answers. All we require is your honest, direct opinion. Your responses along with those of other District Sales Managers will be tabulated by IBM equipment.

There are sections to this study. Each section has its own directions. It is important to read these directions most carefully.

When you have completed your responses to these forms return them in the enclosed pre-paid, self-addressed envelope.

In the near future two additional sets of these forms will be mailed to you.

Again, your answers will be treated confidentially. Your cooperation is most appreciated.

ED DSM
EG CG
To:          October 5, 1966
             Regional Sales Manager

From: Edmond Coughlin Re: Management Development
      Director of Sales Manpower Development Research Study

One of our foremost objectives here in Marketing Staff is a continuous study of those management development activities involving field sales management.

Of special interest to us currently is a projected research analysis of the leadership behavior patterns of the District Sales Manager. Therefore, as a Regional Sales Manager we would like your cooperation in a scientific study of the leadership behavior patterns of managers in the insurance industry.

This scientific research program will be conducted by Mr. Bernard Deitzer, an employee of these Companies and also a part-time graduate student in management at The Ohio State University. Mr. Deitzer will employ methods developed by The Ohio State University Personnel Research Board to describe objectively the managerial behavior of persons in leadership positions.

We have assured Mr. Deitzer of our cooperation in this independent objective study which could make a valuable contribution to the study of management development in the Office of Marketing and in the insurance industry.

It will simply mean that you will be asked to complete a set of questionnaires at different time intervals. More details will accompany the questionnaires which will follow this letter.

The procedure will require little time and all material will be treated confidentially. Mr. Deitzer will handle all the research details in this independent research study.

We hope you will give this valuable research study your enthusiastic support.

Your cooperation will be greatly appreciated.

EC RSM CG
To: Regional Sales Manager
From: Bernard A. Deitzer
Re: Management Development Research Study

October 5, 1966

Earlier, Ed Coughlin wrote you about the management development study being conducted. We appreciate your cooperation and participation in this scientific study designed to obtain an analysis of leadership in the insurance industry.

This is not a test but a measurement of managerial behavior. There are no right or wrong answers. All we require is your honest, direct opinion. Your responses along with those of other Regional Sales Managers will be tabulated by IBM equipment.

There are sections to this study. Each section has its own directions. It is important to read these directions most carefully.

When you have completed your responses to these forms return them in the enclosed pre-paid, self-addressed envelope.

In the near future two additional sets of these forms will be mailed to you.

Again, your answers will be treated confidentially. Your cooperation is most appreciated.
To: Bernard A. Deitzer
From: Bernard A. Deitzer
Re: Management Development Research Study

November 3, 1966

Thanks very much for completing the first set of research questionnaires sent you four weeks ago.

Now as the next phase of this important study we would appreciate your completing the second set of materials. These materials are identical to the previous ones except for the biographical sketch.

As we indicated earlier, this study concerns itself with the degree of influence exerted by the Basic School in Sales Management upon the District Sales Manager. And since we are dealing with only a sample of DSM's your completion of these forms is most essential to the success of this program. So we urge you to please complete and return the forms quickly in the self-addressed, stamped envelopes.

Again, this is an independent, confidential research study program.

May I hear from you by November 18th.

BAD:dds
To: November 3, 1966

From: Edmond Coughlin

Re: Management Development Research Study

It was a pleasure to learn of your fine cooperation in responding to the first set of materials that Mr. Deitzer sent you earlier.

As I mentioned, the Office of Marketing is intensely interested in the results of this independent research study and supports it wholeheartedly. And again, since the study concerns only a small sample of DSM's, your individual replies are essential.

Your continued cooperation is encouraged.

EC:sd
To: July 12, 1966

From: Bernard A. Deitzer

Re: Management Development Research Study

Thanks very much for completing the first set of research questionnaires sent you four weeks ago.

Now as the next phase of this important study we would appreciate your completing the second set of materials. These materials are identical to the previous ones except for the biographical sketch.

As we indicated earlier, this study concerns itself with the degree of influence exerted by the Basic School in Sales Management upon the District Sales Manager. And since we are dealing with only a sample of 32 DSM's your completion of these forms is most essential to the success of this program. So we urge you to please complete and return the forms quickly in the self addressed, stamped envelopes.

Again, this is an independent, confidential research study program.

May I hear from you by July 23rd.

BAD:dss
To: December 12, 1966

From: Bernard A. Deitzer
Re: Management Development Research Study

Attached is the final set of research questionnaires for your completion. You will receive no more questionnaires.

You will observe that these questionnaires are identical to the previous set. This is intentional in order to get a reading of management performance over a period of time.

Without your excellent cooperation during the last three months this study would have been impossible.

Within a short time, after all data has been tabulated, we will be glad to share our results with you.

Again, thank you for your help.

Will you please return the questionnaires by December 27th?

BAD: dss
Job Description

District Sales Manager

I. OBJECTIVE:

To recruit, develop and direct a sales force which will: develop a satisfactory volume of new quality business for each line of service available through the companies, maintain a high persistency of contracts in force and service the needs of contract owners assigned to his district. To develop and maintain sponsor relations, policyholder and shareholder advisory programs.

II. RESPONSIBLE TO: Regional Sales Manager

III. RESPONSIBLE FOR: Local Agents
District Office Sales Clerical

IV. DUTIES AND RESPONSIBILITIES:

Recruits, contracts and supervises an adequate agency force.

Initiates, promotes and supervises the necessary training programs for the development of qualified agents in his district; assists in conducting regional sales training programs as required.

Coordinates the activities of his local agents to assure uniform and efficient coverage of the full line of services throughout his district.

Studies industry trends and the needs of contract owners in his district as applicable to the productivity of his local agents.

Participates with the Regional Sales Manager in reviewing assigned annual sales quotas for his district for concurrence, and/or makes recommendations for amounts to be established.

Studies sales forecasts and allocated quotas for his district with a view to anticipating work loads, personnel needs, changes in office facilities, needed equipment and supplies.

Collaborates with the agents in establishing mutually satisfactory sales quotas and assists in the accomplishment of same.

Formulates recommendations concerning tentative budgetary requirements and related programs for the district as requested by the Regional Sales Manager.

Maintains required contacts and promotes harmonious relationships with sponsoring organizations and others involved in his district sales activities.

Develops and maintains good relationships with contract owners and clients and promotes the welfare of the Companies in general within his district through constructive public relations.
IV. DUTIES AND RESPONSIBILITIES (cont'd)

Plans and develops programs and conducts regular local agents' meetings for his district, assists in Advisory Council Meetings, and assists in other meetings as directed.

Maintains the necessary reports and controls programs.

Develops and submits to the Regional Sales Manager his schedule of activities as required.

Selects district office sales personnel and administers all applicable phases of the Companies' personnel program with respect to the office staff and agents under his supervision.

V. EDUCATION AND EXPERIENCE:

Degree: BA or BS or equivalent.

Previous Work Experience: Minimum of three years' experience as an agent or comparable sales work. Region special agent experience and/or sales supervisory activities highly desirable.
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**Unpublished Materials**


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Stogdill, Ralph M. "Manual for Leader Behavior Description Questionnaire - Form XII," Columbus: The Ohio State University, Bureau of Business Research, 1963 (Mimeoographed).