

Factors Influencing Individual Job Performance of Extension Agents in the Mississippi State University Extension Service

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The purpose of this study was to determine the level of individual job performance of extension agents in the Mississippi State University Extension Service. Furthermore, this study sought to identify the best predictive indicators for agents' job performance. Agents' job performance was determined from the results of 2005 annual performance evaluation instrument (PEI). Performance evaluation scores indicated an overall high level of job performance for all agents in the study with county directors having higher performance evaluation scores than area agents and 4-H agents. This study also found the best predictor for job performance to be the position of the agent.

Introduction and Theoretical Framework

An employee's job performance is more easily disguised by the individual and less distorted by the observer than attitudes (Brayfield & Crockett, 1955). Measuring job performance within an organization can be stressful at times. In fact, few companies feel comfortable with their system's effectiveness in measuring job performance (Stroul, 1987). Managers admit that they feel that they are "playing God" with their employees careers and incomes (Zemke, 1991). Organizations should periodically measure job performance in an effort to assure that the messages and work practices are not only maintained but also improved upon if necessary. Job performance determines the effectiveness of the individual employee. However, it is the organization's responsibility to transmit the mission and objectives of the organization to its employees. Employee performance knowledge has been derived from researchers interested in employee selection and employee motivation (Schwab & Cummings, 1970).

According to Stroul (1987), performance appraisals have a dual role in an organization. The first role is that of a control mechanism to monitor performance and goal attainment. The second role serves as a feedback mechanism to foster individual growth and development. Zemke (1991) stated that employees often felt that performance appraisals are not "fair" because supervisors sometimes focus on the most recent behavior and not over a period of time and a supervisor may just guess at an employee's performance. Management decisions on performance measurement typically involve subjective judgments and often the interpretation of the facts and the final results is beyond the employee's control (Porter & Lawler, 1968).

A study by Wright (1997) established that employees that felt detached from the organization would lose attitudinal commitment towards the organization and thereby not accept the organizations goals and values. This study also found that attitudinal commitment towards the organization measured the extent to which an employee wanted to, or desired to remain with an organization. Martinko and Gardner (1982) stated that an employee's performance would be reduced in unpredictable work environments causing workers to feel helpless and withdrawn

from the organization. The authors even suggested that organizations that persisted in these work environments inadvertently conditioned this passive behavior.

Feedback from performance appraisals is important to everyone involved from employer to employee. Employees view performance feedback from a manager as favorable when the manager adopts the role of a counselor and sets a helpful tone (Stroul, 1987). According to Zemke (1991) there are two basic expectations of a performance appraisal. First, a performance appraisal should aid managers substantially in the short term by improving employee performance and over the long term by contributing to employee development. Second, a performance appraisal should serve as an effective, efficient bookkeeping system for the compensation and industrial relations departments. However, Stroul (1987) stated that the organizational goal of using performance appraisal to develop employees through counseling, coaching, and career planning was in direct conflict with the organizational goal to seek information on which to base rewards and personnel decisions.

Periodic evaluation of extension agents' job performance is needed to ensure that the clientele's needs are being met. Performance appraisal concerns all employees within the cooperative extension service and contributes to employee motivation, work performance, and educational effectiveness (Davis & Verma, 1993). Annual agent evaluation is standard practice within the extension service and is used to determine the amount of time and energy spent towards meeting the public's needs. The success of extension programs relies on the performance of agents in the field; therefore, performance appraisal is a critical management function (Davis & Verma, 1993). To identify how well an organization is fulfilling its mission, it is very important to understand the relationship between employee performance and customer satisfaction (Terry & Israel, 2004).

Performance evaluations of extension agents are critical in determining if the clientele's needs are being met. Agents are trained professionals and wish to be treated as such when being evaluated on job performance (Davis & Verma, 1993). Agents also want to know what is expected of them and whether or not they are accomplishing the job and supervisory expectations (Davis & Verma, 1993).

Reorganization of the Mississippi State University Extension Service has placed responsibilities on members of the county staff that were not part of their original job description. Management restructuring is a means to increase the efficiency and effectiveness of the personnel resources through significant changes in organizational structure (Jayarantne & Gamon, 1998). These new responsibilities could influence agents' job performance within their specified area. Extension agents now occupy more specialized positions and in turn are expected to perform within their level of expertise to meet the needs of the clientele. Therefore, a better understanding of agents' work, attitudes, and behavior during an organizational change is necessary to help extension administration plan educational programs that will alleviate possible negative effects of organizational changes on job performance (Jayarantne & Gamon, 1998).

Purpose and Objectives

The purpose of this paper is to describe the relationship between personality type, demographic characteristics, and job performance extension agents in the Mississippi State University Extension Service. Specific objectives of the study were to:

1. Identify the individual personality types of extension agents using the Myers-Briggs Type Indicator (MBTI).
2. Determine the individual job performance of extension agents using the Performance Evaluation Instrument (PEI).
3. Determine whether a relationship existed between the demographic characteristics and job performance of extension agents.
4. Determine whether a relationship existed between job performance and individual personality types of extension agents.
5. Determine the best predictive indicator for agents' performance evaluation scores.

Methods and Procedures

This study utilized both descriptive survey and descriptive correlational research designs. Descriptive research asks questions about the nature, incidence, or distribution of variables, and is primarily concerned with identifying the characteristics of a population (Ary, Jacobs, & Razavieh, 2002; Borg & Gall, 1989). Survey research utilizes instruments such as questionnaires and interviews to gather information from groups of respondents and is usually based upon data obtained from participant observation (Borg & Gall, 1989). Correlational research refers to the observation of two variables and investigates whether there is a relationship between variables through the use of correlational statistics (Borg & Gall, 1989; Gravetter & Wallnau, 2004).

The target population for the study consisted of all county directors, area agents, and 4-H agents employed in the Mississippi State University Extension Service. A list obtained from the Extension Service Intranet identified 180 potential participants. All agents were invited to participate in the study.

Two instruments were used to collect data for this study. The first instrument was the Myers-Briggs Type Indicator (MBTI). The MBTI is administered to Extension agents as part of new agent orientation. These pre-existing records were used as opposed to reassessment of the population because personality type does not change over time. To determine how many agents had a personality profile on file, staff development personnel reviewed the target population list and concluded that MBTI records exist for 59 County Directors, 50 Area Agents, and 39 4-H Agents for a total of 143 agents having a personality profile on file..

The MBTI contains four indices that reflect the four basic preferences that direct the use of perception and judgment (Reeves, 1995). Barbuto, Plummer, and Brett (1998) and Myers and McCaulley (1985) summarize the four indices of Jung's psychological types in the following manner:

1. A person can be labeled as either an extravert or an introvert. Extraverts are characterized by their attitudes toward the external environment of people and actions, whereas introverts are characterized by their attitudes toward the internal environment of thoughts and ideas.
2. Preferences of sensing and intuition are the way individuals perceive the world. Sensing types tend to collect information using the five senses and prefer to focus on the practical realities of situations. Intuitive types on the other hand collect information using a sixth sense that focuses on the possibilities in a situation.
3. Preferences of judgment are either thinking or feeling. Thinking and feeling preferences refers to the manner in which individuals make decisions. Those individuals using the thinking preference make decisions based on consideration of cause and effect, whereas those individuals with the feeling preference make decisions based on who will be impacted by the decision, the relationship with the affected person, and how those individuals impacted by the decision will react.
4. The final preference is judging and perceiving. Individuals exhibiting the judging preference favor organization and careful planning of their activities. People with the perceiving preference favor a more flexible lifestyle with very little to no structure.

The second instrument was the Performance Evaluation Instrument (PEI). The PEI measures an agent's performance in five areas of programming: the identification and assessment of needs, program planning, program implementation, program evaluation, general duties, and requirements. There are five evaluation statements for each of the five areas of programming, except for program implementation, which has ten (Cheatham, 1991). The PEI utilizes a five-point scale for each of the 30 items with a maximum attainable score of 30 with Part III (program implementation), which counts for 10 points. A score of 18 or less would be considered low and a warning would be written with specific corrective actions that should be implemented in the areas of concern (Cheatham, 1991).

Reliability and validity of the PEI was initially established in 1976 through a pilot test. The pilot test analyzed 89 items using the test-retest method with four district agents and two program leaders. The agents involved in the pilot study were pre-selected and rated by the district agents, with an independent evaluation being made by the appropriate program leaders. The immediate supervisor made the primary evaluation, with the secondary evaluation being made by the program leaders. The reliability coefficient using the test-retest method using the Likert Scale was .80. In 1985, a judge ruled that the PEI was valid, objective, racially non-discriminatory, and had been developed in accordance with the guidelines of the Equal Employment Opportunity Commission. The PEI was reviewed in 1988 due to perceived failure to measure performance. After further review the PEI was reduced to 30 items and the Birkman-Mefferd Research Foundation reconfirmed the content validity of the instrument (Cheatham, 1991).

Performance scores were collected by district directors at the 2005 annual evaluation of each agent and submitted to the Office of Administrative Services. The resultant scores were entered into a personnel database and remain on file within this office as part of each agent's job record. PEI scores that were collected in 2005 were used in this study.

Demographic data were also collected from agents through the use on an electronic survey administered via SurveyMonkey.com. A total of 143 agents provided responses for this part of the study for a response rate of 79 percent.

Data in this study was analyzed using SPSS 13.0[®]. Descriptive statistics, including frequencies and percentages, were used to summarize data. The data were crosstabulated and a chi-square statistic was calculated to determine the Cramer's *V* coefficient for comparison of each variable against another. To describe the strength of relationships in this study, Davis' (1971) conventions were utilized. Bivariate and rank order correlations were used to determine the relationships between the job performance scores and MBTI/demographic characteristics. An alpha level of .05 was set *a priori* and used to determine if significant differences existed between variables of interest. Stepwise linear regression was performed to determine the best predictive indicator for agents' job performance scores from demographic characteristics and personality type.

Findings

Demographics

Respondents were described by the following characteristics: (a) gender, (b) age, (c) race, (d) current position, (e) length of service, and (f) area in which they were located. A summarization of the demographic characteristics of the participating population can be seen in Table 1.

Of the 143 valid responses, 49.6% of the respondents were male and 47.6% of the respondents were female with 2.8% of the participants not indicating their gender. After combining the respondents into age categories, the largest percentage (20.9%) of the respondents identified themselves in the 46-50 age group, with the average age being 42.9 years ($SD=9.2$). As reported in Table 1, 77.6% of the respondents were Caucasian-American while 20.3% were African-American and 0.7% were Asian-American.

The largest percentage (44.0%) of respondents identified themselves as county directors, while 32.2% were area agents. 4-H agents accounted for 23.8% of the participants. The length of service in the agent's current position was combined into categories. A large percentage (34.2%) of the respondents had served in their current position from 1-5 years, with the average length of service being 8.75 years ($SD=7.2$).

Because data was collected after hurricane Katrina, agents were divided into two categories based on the counties in which they work. All counties south of the designated transect were designated disaster areas and counties north of this transect were designated non-disaster areas. The majority (69.2%) of agents worked in the non-disaster area, while 30.8% of the agents included in this study worked in the disaster area.

Table 1
Frequencies and Percentages of Agents' Demographic Characteristics (N=143)

Demographic Characteristic	<i>f</i>	%
Gender		
Male	71	49.6
Female	68	47.6
Not Reported	4	2.8
Age		
24-30	13	9.1
31-35	26	18.2
36-40	12	8.4
41-45	25	17.5
46-50	30	20.9
51-55	21	14.7
Over 55	10	7.0
Not Reported	6	4.2
Race		
African-American	29	20.3
Asian-American	1	0.7
Caucasian-American	111	77.6
Not Reported	2	1.4
Position		
County Director	63	44.0
Area Agent	46	32.2
4-H Agent	34	23.8
Length of Service		
1-5	49	34.2
6-10	27	18.9
11-15	14	9.8
16-20	8	5.6
21-25	8	5.6
26-30	4	2.8
Not Reported	33	23.1
Location		
Non-Disaster Area	99	69.2
Disaster Area	44	30.8

MBTI Profile and Job Position

Table 2 presents the Myers-Briggs personality types of agents by job position. The personality type most exhibited by 4-H agents was ESFJ (32.1%). Area agents were ESTJ (27.5%) while county directors were almost split equally by the ISFJ (22.0%) and ESTJ (20.0%) personality types. There was a moderate association (Cramer's $V = .46$) between the MBTI profile and job position of the agent.

Table 2
Myers-Briggs Personality Types of Agents by Job Position (N=118)

Personality Type	County Director (n=50)		Area Agent (n=40)		4-H Agent (n=28)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
ISTJ	8	16.0	8	20.0	1	3.6
ISFJ	11	22.0	3	7.5	2	7.1
ISTP	2	4.0	3	7.5	0	0.0
ISFP	1	2.0	0	0.0	2	7.1
ESTP	4	8.0	1	2.5	1	3.6
ESFP	4	8.0	0	0.0	0	0.0
ESTJ	10	20.0	11	27.5	6	21.4
ESFJ	5	10.0	3	7.5	9	32.1
INFJ	1	2.0	0	0.0	0	0.0
INTJ	0	0.0	1	2.5	0	0.0
INFP	0	0.0	0	0.0	1	3.6
INTP	1	2.0	3	7.5	1	10.8
ENFP	1	2.0	1	2.5	3	7.1
ENTP	0	0.0	1	2.5	2	0.0
ENFJ	1	2.0	2	5.0	0	0.0
ENTJ	1	2.0	3	7.5	0	0.0

Note. Cramer's $V = .46$.

Level of Job Performance

Overall performance evaluation scores across the three positions were clustered between 21.0 and 23.5 (maximum score was 30.0). A majority of agents in all three job positions had performance evaluation scores in this range. There was a low association (Cramer's $V = .21$) between the PEI scores and the job position of the agent. Table 3 presents the ranges of agents' PEI scores by job position.

Table 3
Ranges of Agents' Performance Evaluation Scores by Job Position (N=143)

Performance Evaluation Scores	County Director (n=63)		Area Agent (n=46)		4-H Agent (n=34)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
17-20.5	6	9.5	1	2.2	7	20.6
21-23.5	32	50.8	28	60.8	22	64.7
24-25.5	25	39.7	17	37.0	5	14.7

Note. Cramer's *V* = .21.

Demographics and Job Performance

Table 4 presents the relationship between agents' performance evaluation and demographic characteristics. There were significant low, positive correlations between job performance and the following demographic characteristics: age ($\rho = 0.23$) and years in his/her current position ($\rho = 0.19$). A significant low, negative correlation existed between the demographic characteristic of job position ($\rho = -0.22$) and job performance.

Table 4
Relationship Between Agents' Performance Evaluation and Demographic Characteristics

Demographic Characteristic	<i>r_{pb}</i>	<i>P</i>
Area	-0.10 _a	
Gender	-0.13 _a	
Age		0.23* _b
Race	-0.02 _a	
Position		-0.22* _b
Years in Position		0.19* _b

* $p < .05$.

Note. a = point-biserial correlation; b = rank-order correlation.

Job Performance and Personality Type

Table 5 presents the relationship between agents' performance evaluation and individual personality type by preference pairs. There were no significant correlations between the PEI scores and the individual personality type by preference pairs.

Table 5
Relationship Between Agents' Performance Evaluation and Individual Personality Type by Preference Pairs (N=119)

MBTI Preference Pairs	r_{pb}
Extraversion/Introversion	.14
Sensing/Intuitive	.02
Thinking/Feeling	.02
Judging/Perceiving	-.10

Predictive Indicator of Job Performance

A stepwise linear regression model was selected to determine the best predictive indicator for job performance. The initial model containing all variables revealed an $r^2 = .13$. The stepwise linear regression model resulted in $r^2 = .05$ for the demographic characteristic position, thereby suggesting that 5.0% of the variance could be explained by the agent's job position (Table 6).

Table 6
Stepwise Linear Regression Model of Agents' Job Performance with Selected Significant Independent Variable (n=89)

Variable	Unstandardized Coefficients	Standardized Coefficients	S.E.*	t	p
Position	-.198	-.224	0.09	-2.16	.033
Constant	2.68		0.18	14.69	.000

Note. *S.E.= Standardized Error. For Model: $F(1, 88) = 4.67, p < .05; r^2 = .050$

Conclusions/Recommendations/Discussion

A majority of agents in this study belonged to 4 of the 16 personality types: ISTJ, ISFJ, ESTJ, and ESFJ, which were similar to the findings of other studies (Graham, 1983; Reeves, 1995; & Jenkins, 2001). Comparisons of individual preferences of extension agents to those associated with national norms were also similar (Myers & McCaulley, 1985).

Overall, agents excelled in the performance of their jobs as indicated by the PEI. A majority of the scores, regardless of job position, were above average. County directors tended to score slightly higher than area agents and 4-H agents on job performance.

There was no apparent gender differences associated with job performance scores. Overall, males scored only slightly higher than females on job performance. Job performance was highest in those agents employed from 1-5 years. Job performance scores were also

relatively evenly distributed among the lower and middle ranges of scores between non-disaster and disaster areas.

Low positive correlations existed between the demographic characteristics of age, years in job position and job performance. Most agents, regardless of age, scored within the mid range of scores (21-23.5) on the PEI. Those agents 24-30 years of age accounted for the highest percentage within the 21-23.5 score range. Poor performance was found to be non-existent beyond 20 years of service. There was a low negative correlation between the job position of the agent and his/her job performance. Overall scores across the three positions appeared to be clustered around the mid range with scores on the PEI from 12-23.5.

Further examination of the relationships between performance evaluation scores and individual personality type could not establish a relationship between job performance and individual personality type.

The best predictive indicator for agents' performance evaluation scores was the agent's job position; however, the strength of the predictor was considered negligible.

Based on the findings of this study, the following recommendations are presented:

1. Further emphasis should be placed on educating agents during new agent orientation on the effectiveness of knowing their personality type to assist in problem solving and working with colleagues and clientele.
2. Additional studies should be conducted to determine individual demographic characteristics that could relate to job performance that this study did not address.
3. Further studies using different variables should be used in an effort to determine the best predictive indicators for job performance.

Findings from this study suggest that an agent's job performance cannot be attributed to personality type, which has also been found in previous studies (Graham, 1983; Reeves, 1995; & Jenkins, 2001). While no personality type should be viewed as ideal, perhaps personality type can be used as a tool in which agents could be selected based on their individual strengths and weaknesses and how they could be used in order to be a more effective employee.

The results of the agents' performance evaluations indicated that a majority then worked at high levels of job performance. However, lower levels of performance were non-existent beyond 20 years of service. This could be due to the fact that agents were very comfortable with their job responsibilities, and having been employed for an extended period of time, were more able to cope with changes in the organization than agents that had not been employed for an extended period of time and had experienced several organizational shifts in a short amount of time. Although job performance scores were high, a much larger percentage of agents in the non-disaster area had scores higher than did those in the disaster area. Even though hurricane Katrina did impact some regions of the state more than others, all extension personnel experienced a heavier workload due to the storm (P. Reeves, personal communication, November 9, 2005). The PEI scores associated with the disaster area should not be considered substantial as an indicator of less than satisfactory job performance.

This study suggests that county directors scored higher than area agents and 4-H agents on job performance. This increase in job performance may have been due to the ability of the county director to use the many resources at hand to complete many different tasks completed at the same time.

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