Management Skill as a Predictor of Success

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Assessment centers are one of the fastest growing selection methods used in industry today. However, they are underutilized in hospitality and academe (Lowry, 1994). The hospitality industry can use assessment centers to enhance both employee selection and professional development. Hospitality educators can use assessment centers as a development tool in producing graduates who meet the needs of organizations, and also in evaluating administrative and teamwork skills.

In this study, the assessment center process used in the graduate hospitality program at Cornell University is described. It was found that leadership skill best predicted total income upon graduation.

Introduction

Since their first application in the 1950s assessment centers have been used in numerous organizations for assessing executive talent. In the assessment process, typically top-level managers observe employees to gauge management expertise for the purposes of selection, early identification of managerial talent, development planning, identification of training needs, promotion, and management succession (Spychalski, et al., 1994).

Universities have begun using assessment centers as well. At Texas A&M, the University of Maine and throughout the Pennsylvania university system, the assessment center technique has been used to evaluate students in various colleges (Wendel & Joekel, 1991). Baldwin-Wallace College in Berea, Ohio, has used assessment centers to help students develop management and career planning skills (Rea, et al., 1990). John Carroll University and Glasgow Caledonian University in Scotland have used assessment centers at the undergraduate level in management education (Extejt, et al., 2001; Dalziel, et al., 1993).

Though the use of assessment centers has not been widespread in education, rudiments—case studies, role-plays, and in-basket exercises–have been used in the classroom (Wendel & Joekel, 1991). Michigan State University has used assessment centers in their hospitality business program and Cornell University uses an assessment center each year for its incoming Master of Management in Hospitality students.

Research Statement

The focus of this study was the relationship between management skill areas as evaluated by an assessment center and total income upon graduation.

Importance

A review of the literature indicated that there was a lack of consequential hospitality research in this area and the impact of these variables was unknown. This study, therefore, became an initial step in management research in suggesting a positive correlation between leadership skill and total income. Moreover, the findings suggest that schools may be able to increase the value of their programs to students by including leadership skill development in their programs.

Scope

This was a study of students in a master of management hospitality program at Cornell University. The population of interest was the 55-member class. The unit being analyzed was the individual student. Students took paper-and-pencil tests and industry executives observed and rated students' behavior.

While certain results may provide insight, this study does not propose to be generalizable to a wider population.

Review of the Literature

Assessment Centers have been found to be valid, cost-effective, and are viewed as credible by managers and participants in assessing management skills (Adler, 1993). Schmitt, Gooding, Noe, & Kirsh (1984) compared various selection methods and found that assessment centers are better predictors of job performance than the other methods and have high criterion validity (Chan, 1996) regardless of educational level, race, or gender (Schneider & Wallich, 1990). Moreover, assessment centers are seen as being fairer than paper-and-pencil tests because candidates are evaluated on how they act in situations that a manager would commonly encounter (Thornton & Byham, 1982).

Within universities, assessment centers provide educators with a credible method for determining skill development and assist in other ways: they can bring realistic business situations into class, provide for industry and education partnerships, assist in revising the managerial curriculum, aid in counseling students, and based on the management competencies literature (e.g., Bass, 1981; Boyatzis, 1982; Mintzberg, 1975) and interviews with executives, they can produce a significant impact on more skills than participation in a development program (Extejt, et al., 2000).

One study found 44 percent of organizations used assessment centers as part of their graduating student recruitment (Keenan, 1995). Such a high degree of use by organizations (IRS Employment Review, 1992) gives universities opportunities to prepare students for these real-world situations.

The primary drawbacks to using assessment centers include time, coordination required, and cost over testing alone (Hoffman & Thornton, 1997). Moreover, when using assessment centers as a selection tool within organizations, unsuccessful candidates showed a decline in self-esteem and need for achievement (Fletcher, 1991).

McEwen & McEwen (1995), Scherer (1990), and Dulewicz (1991) determined that it is difficult to measure management skills with paper-and-pencil tests alone. Assessment center exercises have been found to be more successful than aptitude tests in predicting management success (Rea, et al., 1990). More than 50 validation studies (Dulewicz, 1991) indicate that assessment centers predict future performance or success better than other assessment tools.

Methodology

Independent Variables

We used test scores and five management skills which were evaluated during the assessment center–written communication, presentational speaking, group process, leadership, and creativity–as our predictor variables. Additionally, students were segmented on the basis of personal and environmental demographics.

An overview of the six skills that were assessed is provided in the paragraphs which follow. It was assumed that students would aspire to becoming general managers. Therefore, exercises were focused toward that end.

Area One: Standardized Tests

The program began with students completing four standardized tests measuring 1.) Critical thinking ability, 2.) Stress management skill, 3.)Time management skill, and 4.) Supervisory skill.

Area Two: Written Communication

This area measured students' competency in two ways 1.) Communicating information clearly and directly by analyzing a profit and loss statement, and 2.) Maintaining a positive guest relationship while communicating essential information.

Area Three: Presentational Speaking

Participants were asked to put themselves in the GM's position and inspire a group of new employees. Each person was assessed on the effectiveness of his or her organization, development, ability to relate to listeners, and delivery skills.

Area Four: Group Process

The Group Process session provided an opportunity for students to discuss key organizational issues in small group settings such as service quality and guest services. Participants were asked, for instance, "What would you do when an important guest has a heated conflict with a key employee?"

Area Five: Leadership

Few skills are as important to senior managers as effective leadership. In this exercise, each student served as leader of a five-member team. The leader was given a specific task and asked to facilitate the development and presentation of a strategic plan. The leader was also charged with engendering the full support of the group.

Area Six: Creativity

Leaders in the next century will be those who develop innovative solutions to pressing problems and who approach daily challenges with entrepreneurial perspectives. In the creativity exercise, students created a commercial advertising the organization's hotel of the future.

Follow Up

Goodge (1995) found that for an assessment center process to work, it must be incorporated into a management development plan. Feedback provided during the individual interview sessions and in a comprehensive summary report following the session was used as a basis for students' professional development efforts.

Dependent Variables

We used job offer data upon graduation in determining our outcome variable, total annualized income for year one (including signing bonus, base salary, commission, and performance bonus). While success can be defined in a number of ways, total annualized income for year one was used as the outcome variable of interest. Additionally, students were segmented on the basis of personal and environmental demographics such as industry, position, and position focus. Data were available for all 55 master's program graduates.

Research Goal, Nature, Question, and Hypothesis

The goal of the study was to detect relationships that might exist among the independent and dependent variables. The type of study therefore suggested a one-shot investigation correlational design instead of an experimental design (Campbell & Stanley, 1963). A significance level of $p < 0.05$ was adopted to determine whether relationships existed (Schmitt & Klimoski, 1991).

Research Question: Do management skill area(s) predict total income?

Research Hypothesis: Higher ratings in management skill area(s) will predict higher total income.

This hypothesis reflects the relationship between assessment center ratings predicting organizational success suggested in the literature review from more than 50 validation studies (Dulewicz, 1991).

Analysis and Results

Model Formulation

We performed the steps in model formulation. Overall, the majority of the scatter plot pairings suggested good linear relationships with few gaps in the data. A linear regression was therefore identified as a possible method for analysis.

Following this preliminary inspection, step-by-step and hierarchical regression were used to assist in the development of a model which would be based on theory from the literature, simple and straightforward, and demonstrate good fit.

Preliminary results are presented in the tables that follow.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3285214268.481	1	3285214268.481	10.142	.004
	Residual	7126619064.852	22	323937230.221		
	Total	10411833333.333	23			

a Predictors: (Constant), LEAD
b Dependent Variable: TOTINC

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1865.301	20053.799		-.093	-.927
LEAD	16892.009	5304.322	.562	3.185	.004

a Dependent Variable: TOTINC

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.562	.316	.284	17998.2563

a Predictors: (Constant), LEAD

Diagnostics

We performed graphic and statistical diagnostic tests to help ensure soundness of results. Remedial techniques were examined where data did not fall into accordance with the regression model's conditions. The model was determined to demonstrate goodness of fit, be appropriate from which to make inferences, and explained 31.6 percent of the variance. The regression equation, using the beta values, is expressed:

Regression Equation

Y	=	Bo	+	B1X1
Total Income	=	-1865.301 (Constant)	+	16892.009 (Leadership)

Discussion

Findings

Significant support was found (P=.004) for the research question and hypothesis that students who scored higher ratings in leadership received higher total income job offers upon graduation. Significance was not found for any of the other management skills assessed (either alone or bundled) as predicting total income. Implications for application suggest a direct outcome supporting the value of schools including leadership skill development in their programs, higher leadership skill equals higher total income.

Limitations

1. The goal of this study was to detect relationships rather than to establish cause-effect (as in experimental design). The study design, therefore, can only suggest bases for correlations.

2. This was the first time that a study of this type had been conducted in this fashion. Additional studies in this area of organizational behavior of would have helped suggest hypothesized relationships more precisely.

3.   This study included only one class of 55 master's program students. While findings provide insight into relationships that may exist, additional numbers of students, classes, and/or programs may have added to the validity of the findings.

4.   The cross-sectional rather than longitudinal nature of the may be a limitation. It could have added validity to follow the students beyond their first year of total income to determine whether the positive correlation held.

5.   The literature identified more than 50 studies indicating assessment centers' proficiency in predicting success better than other assessment tools. We selected only one measure of success in using total income as our dependent variable.

Areas for Future Study

1.   Replication. Since this was the first study of its type, additional information from more participants in other studies would help enhance the validity of the findings.

2.   Experimental Design. The findings suggest that a future study using experimental design could help enhance the study's validity. Experimental design could also become a next logical step in determining cause and effect.

Summary

This study achieved three worthwhile purposes. First, it enabled us to gain insight into management skills and how they relate to total income. Second, it was possible to utilize theoretical foundations and rigorous methods to investigate a hunch, which suggested relationships among management skills and total income. Third, it was possible to develop a model which can be used to measure leadership in determining how it may relate to total income.

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