

MOTIVATING AND MANAGING IT PROFESSIONALS VERSUS BANKERS

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ABSTRACT

This paper expands a pilot study that is part of a larger, long-term project. Computer professionals have higher motivation needs than general white collar workers and computer jobs have higher motivating potential than general white collar jobs, according to several studies published in the 1980s and 1990s. In an attempt to find a predictor of future success of IT graduates, those studies need to be updated to reflect the greatly changed nature of computer-related jobs. This paper reports on the findings of a study to determine if the Job Diagnostic Survey instrument is valid for non-IT white collar workers.

INTRODUCTION

This paper describes an extension of a long-term research project to determine whether the Growth Needs Strengths (GNS) of workers and the Motivating Potential Score (MPS) of jobs continue to be valid measurements. GNS and MPS are measured by the Job Diagnostic Survey (JDS) that was popularized in the 1970s and 1980s for general workers and many times since then for the computer professionals and information technology (IT) workers.

Specifically, recent research by these authors has shown that IT jobs still have the same MPS as they did in the 1980s but that the GNS of IT workers has become lower, thereby creating a mismatch. That mismatch can lead to workers being overly challenged. That in turn can cause lower productivity and burn-out.

In that recent study, the question was raised as to whether the JDS can be used for all workers and for all jobs. That gave rise to this study which examines the GNS of forty-eight white collar banking workers and the MPS of their jobs. The results are compared both to recent research on IT jobs and earlier research on computer programmers, analysts and operators and on all jobs.

RESEARCH METHODS, RESULTS, AND DISCUSSION

The hypotheses that the researchers set to disprove is that there is no difference between GNS and MPS today versus 1980 for white collar workers and their jobs, but that there still is difference between GNS and MPS of general white collar workers and jobs versus computer workers and jobs. If they fail to disprove the hypothesis, the conclusion would be that the Job Diagnostic Survey (JDS) is still a valid instrument for use with white collar workers. That could, in turn, cause these researchers to alter their long-term study.

Data has been collected using the Job Diagnostic Survey (JDS) from forty-eight white collar workers in

a regional banking operation. Although the JDS collects demographic data, there was not a large enough sample to validly report data by gender, age, education level, time on the job, or job categories.

Table 1 examines GNS and MPS in the aggregate and presents some very interesting, statistically-significant results. It shows the mean GNS and MPS of the forty-eight subjects in this study (4.96 and 126.2, respectively) compared to the mean GNS and MPS of the subjects in several previous studies. A one-sample T test was used repetitively, with the test value set as the GNS or the MPS of previous studies and the confidence level set at 95%.

Table 1. Mean GNS (4.76) and MPS (126.2) of 48 Bank Employees Compared to Previous Studies

Previous Study	Test Value		T	Sig. at .05 CI	Can Significant Difference Be Concluded?
	GNS	MPS			
Cougar & Zawacki (1980) study: programmers/analysts	GNS	5.91	-13.313	.000	Yes
	MPS	153.6	-3.445	.001	Yes
Cougar & Zawacki (1980) study: computer operators	GNS	5.78	-11.805	.000	Yes
	MPS	98.6	3.464	.001	Yes
Hackman & Oldham (1980) study: white collar workers	GNS	5.19	-4.963	.000	Yes
	MPS	128.1	-.242	.810	No
Hackman & Oldham (1980) study: blue collar workers	GNS	4.74	.256	.799	No
	MPS	121.4	.600	.552	No
Carpenter, et al, (2005) study: 57 college CIS majors	GNS	4.83	-.788	.435	No
	MPS	(Data not collected.)			
Carpenter, et al. (2007) study: 43 IT professionals	GNS	5.07	-3.571	.001	Yes
		Independent samples T	2.134	.036	
	MPS	161.9	-4.487	.000	Yes
		Independent samples T	2.907	.005	

The previous study used for the first two comparisons was the 1980 work by Cougar and Zawacki. First, the GNS and MPS data collected in this study was compared to the GNS and MPS of 1980 computer professionals, i.e., programmers and analysts. Both the GNS and the MPS of this study are significantly different that in those studies. That indicates the bank employees and their jobs in this study are not similar to 1980s computer professionals.

Similarly, the last set of comparisons in Table 1 show that bank employees and their jobs in this study are dissimilar to today's IT workers and their jobs. For those comparisons, the authors used not only the one-sample t-test as for all of the other comparisons, but also the independent samples t-test as the authors had access to all the data points in both samples. Both sets of results yielded identical conclusions although the t and significance values were predictably different due to the independent samples t-test accounting for variability in both samples.

However, when the data in this study is compared to the original JDS research by Hackman et al., interesting results appear. The MPS of the bank employees' jobs in this study is not statistically different than either the MPS of 1980s white collar workers or the MPS of 1980's blue collar workers. That would indicate that banking jobs provide motivation levels that are statistically similar to both white and blue collar jobs in the past. The similarity is greater to white collar than to blue collar jobs, although not statistically dissimilar from either.

Yet, the GNS of the banking employees in this study is significantly different than their 1980s counterparts. Indeed, the GNS of the subjects in this study are not significantly different than the GNS of blue collar workers in the 1980s. Furthermore, there appears to be a substantial mismatch between the GNS of the banking employees of this study and the MPS of their jobs. That mismatch has not yet been tested statistically. However, if it exists, it can lead to employees being overly challenged, which in turn creates lower productivity and burnout.

One other comparison was run that produced an interesting result. In 2005, a study was conducted of 57 college students who were majors in computer information systems. Because the GNS of those students did not match the GNS of computer professionals, the authors compared those students' GNS to the 48 banking employees in this study. The t-test indicated that it cannot be ruled out that the GNS of those CIS students is similar to the GNS of banking employees.

Consequently, the hypothesis was not disproved that GNS and MPS of banking, i.e. white collar, employees and jobs are different than those of computer workers. However, there is evidence to reject the hypothesis that banking employees and jobs are similar to white collar workers and jobs of the 1980s in terms of GNS and MPS. However, this is still in the pilot study stage and needs to be expanded considerably. The number of subjects in each of the gender, age, time on the job, job category subdivisions needs to be increased dramatically in order to run statistically valid tests. In particular, the study should be expanded into industries other than banking.

CONCLUSION

This paper has reported on the expansion of a pilot study that grew out of a larger research project to determine if there is a predictor of future success of information technology workers. So far, this research has confirmed that more research is in order. The results to date indicate that the Growth Needs Strengths of today's banking workers is comparable to that of 1980's blue collar workers, while the Motivating Potential Score of the jobs they hold is statistically similar to both white and blue collar workers of the 1980s. The mismatch between bankers GNS and MPS is troubling. The ultimate conclusion is that this research should continue and be expanded greatly.

LITERATURE REVIEW AND REFERENCES

A review of the relevant literature and list of references are available by request from the authors.