

Mapping Personality Traits of High Performers: A Study of Middle and Lower Management

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The present study was conducted on 120 associates from lower and middle level management from a manufacturing and an IT organization to analyze the personality traits which can indicate towards who can be potentially high performers. The results suggest that the associates having sensing and judging personality orientation are better performers irrespective of their level in the managerial hierarchy. Also the individuals with the personality type of Sensing-Judging are significantly better performers as compared to Sensing-Perceiving (SP), Intuitive-Perceiving (NP) and Intuitive- Judging (NJ)s. This study proposes that there are certain personality types who tend to be high performers because of their characteristic traits such as Extraverted Thinking with Introverted Sensing (ESTJ), Introverted Sensing with Extraverted Thinking (ISTJ), Extraverted Feeling with Introverted Sensing (ESFJ), or Introverted Sensing with Extraverted Feeling (ISFJ) can be better performers. The results of the present study do not differentiate on the basis of gender.

Keywords: Sensing (S), Judging (J), High Performance, Performing Personality Types.

'Create a team of high performers and you're likely to succeed, but keep a lot of low performers and you're apt to fail.'

Avoid Costly Mis-Hires! Dr. Brad Smart*

How do you find and match the right people to the right jobs? is a question which troubles every managerial mind. The researchers have tried to find the answer to this in the personal characteristics determining the working penchant and orientation. The relationship between personality and job performance has been a topic of key interest for organizational psychologists and researchers since last century. The researches from early 1900s to mid 1980s were majorly focused on relationship of individual scales from personality inventories to various aspects of job performance. From Guion and Gottier (1965) and Mischel (1968) to Davis-Blake and Pfeffer (1989), personality has been roundly criticized as an ineffective predictor of performance. The overall conclusion from this era of research was that personality and job performance are not related in any meaningful

way across traits and across situations (Barrick et al, 2002). The second phase from mid 1980s till date is characterized by the use of five factor model or some more comprehensive personality tests. Also in this period many meta analytic studies were conducted to summarize results quantitatively across studies. The results of both primary and meta analytic studies using five factor model from this era led to more optimistic results and a better understanding of personality- performance relationship. In recent years, however, researchers have acknowledged and documented the fact that we all have personalities (e.g. Goldberg, 1993) and that personality matters because it predicts and explains behavior at work. This research, based on a construct-oriented approach primarily using the "Big Five" traits, has consistently shown that personality predicts job performance across

*This statement is based on 65,000 face-to-face case studies conducted by Dr. Brad Smart

a wide variety of outcomes that organizations value, in jobs ranging from skilled and semiskilled (e.g., baggage handlers, production employees) to executives.

Research has shown that managers weight individual personality characteristics as if they were nearly as important as general mental ability, during the hiring decision (Dunn, Mount, Barrick, & Ones, 1995). In fact, it is hard to find a manager who says they would prefer to hire someone who is careless, irresponsible, lazy, impulsive, and low in achievement striving (low in Conscientiousness). Similarly, not many managers seek to hire individuals who are anxious, hostile, personally insecure, and depressed (low in Emotional Stability). A growing body of evidence shows that personality measures are logically and statistically significantly related to successful job performance (Day & Silverman, 1989; Hogan & Hogan, 1989). Data have come from studies in various sectors as diverse as insurance claim examiners (Arneson, Millikin-Davies, & Hogan, 1993) to sewing machine operators (Krilowicz & Lowery, 1996). There have also been various meta-analytical reviews in this area. Hough (1992, 1998) concludes that personality measures do predict job performance but only when validity coefficients are summarized according to constructs from personality taxonomy.

Researchers have found personality to be meaningfully related to many work-related behaviors and outcomes that manager's care about, and that matter to organizations. These include less counterproductive behavior, turnover, absenteeism, tardiness, and more citizenship behaviors, success in groups, job satisfaction, safety, leadership effectiveness, and task performance. They also influence the fit with other individuals (e.g., supervisors), a team, or an organization (Barrick, Mitchell, & Stewart, 2003; Johnson, 2003). Studies have been conducted by using Myers-Briggs Types Indicator (MBTI) (McCrae & Costa, 1989; Fitzgerald & Kirby, 1997) on the basis of big five model of personality. These five factors of personality are extraversion, agreeableness,

conscientiousness, emotional stability, openness to experience. Research (Barrick & Mount, 1991; Tett, Jackson & Rothstein, 1991; Judge et al, 1997) on the big five also has found important relationships between these personality dimensions and job performance. The preponderance of evidence shows that individuals who are dependable, reliable, careful, thorough, able to plan, organized, hard working, persistent and achievement oriented tend to have higher job performance in most if not all occupations (Mount et al, 1994).

Research also shows that personality contributes incremental validity in the prediction of job performance above and beyond that accounted for by other predictors, including general mental ability and biodata (McHenry, Hough, Toquam, Hanson, & Ashworth, 1990; Mount, Witt, & Barrick, 2000; Schmidt & Hunter, 1998). Research on team composition also is increasingly examining the role of personality (Barrick, Stewart, Neubert, & Mount, 1998; Kozlowski & Bell, 2003; Neuman, Wagner, & Christiansen, 1999). Although much of this research has targeted main effects on team effectiveness (Barrick et al., 1998), results also show that the traits of the team's members influence the group's processes (Neuman et. al., 1999), and these influences vary based on the contextual demands inherent in the group and the amount of team interdependence (Kozlowski & Bell, 2003). What further complicates this research is the finding that a person's traits can also change the situation (Stewart & Barrick, 2004). For example, having "one bad apple" in a team can actually change the work environment. Just having one person who is disagreeable or neurotic (low on Agreeableness or Emotional Stability) has been shown to lead to less communication, lower interdependence, less workload sharing, and more conflict (Barrick et al., 1998). Similarly, Barry and Stewart (1997) found that teams were unable to function effectively if they had too many (or too few) extraverts in a team setting.

Kieffer, Schinka and Curtiss (2004) in a study of 514 employees indicated that the interaction of differentiation with Agreeableness and Conscientiousness explained statistically

significant variance in work performance for men, and that the interaction of congruence with Agreeableness, Artistic, and Social subscales was statistically significantly related to work performance in women. Devito Da Cunha and Greathead (2004) conducted a study of computer programmers to assess any link between performance and MBTI personality type. They found that the only significant correlation was that between the Sensing scale and the code review score. There were minor, non-significant correlations with the extroversion and thinking scales but no correlation whatsoever was found with the judging scale. Bradley and Hebert (1997) in a study of comparison of the performance of two information systems development teams similar in demographics and cognitive ability revealed that significant differences in personality type, as measured by the Myers Briggs Type Indicator, determined performance differences. Better performance was influenced by balance of types, good match between personalities and tasks, and leaders' personality types.

Hogan and Holland (2003) conducted a meta-analysis to illustrate the benefit of matching specific personality traits to relevant criteria. They found that when the criteria relate to "getting along" performance, the best predictors are Emotional Stability, Conscientiousness, and Agreeableness. In contrast, when the criterion reflects, "getting ahead" the best personality predictors were a facet of Extraversion (Ambition), Emotional Stability, and Conscientiousness. Barrick, Stewart and Piotrowski (2002) examined the relationship between five personality dimensions and job performance in a sample of sales representatives. The findings indicated that accomplishment in striving, mediate relationship between two personality factors, i.e. extraversion and conscientiousness, and supervisor's rating of sales performance. Witt, Burke, Barrick and Mount (2002) made an attempt to analyze interactive effects of conscientiousness and agreeableness on job performance. Data were collected from employees and their supervisors in one public sector and six private sector organizations. The results indicated that among

the highly conscientious workers, those high in agreeableness received higher ratings of job performance than those low in agreeableness. The interaction effect of conscientiousness and agreeableness was consistently found across five different samples in the study.

Goffin et al. (2000) found that both extroversion and dominance were correlated with job performance. Lunenberg (1992) used 16PF in his study and found that the factors of dominance, imagination, self-sufficiency, and warmth were related to above-average performance. Schuerger and Ekeberg (1994) found similar results in their study, in comparing the five global personality traits with performance. They found significant correlations between performance and extraversion, anxiety, tough-mindedness, independence, and self-control. Baute (2000) in a study on firefighters found that the primary factors of emotional stability, utilitarianism, practicality, and traditionalism were related to high performers. Over 340 Chinese and European middle and senior management of an Asian based international airline completed the Myers-Briggs Type Indicator (MBTI) which was correlated with reliable, behavioral measures of performance management. Performance managerial practices included customer focus, decision making, team work, communication as well as the overall score and a rating of future potential rated by their direct reporting superior (and his/her superior) on his/her management performance over the previous year. The performance test data was correlated with four dimensions arising from the MBTI—separately for the European expatriates and Chinese. Fewer correlations than may be expected by chance arose from the correlational and regression analysis (Furnham & Stringfield, 1993).

The MBTI framework has become quite popular in understanding the personality of the individuals in organizations for development purpose; however evidences of its usage at the time of recruitment are very bleak. It may be so because the literature does not strongly provide supportive studies which can be taken as a baseline for taking recruitment

decision. Realizing this gap the present study was designed to identify the differences in the personality traits of high and low performing associates using MBTI framework.

Objectives:

- To understand the differences in personality orientation amongst the associates at various level of work performance.
- To understand the differences amongst the different level of associates on their work performance.

Method and Procedure

A 2X5 factorial design was applied to compare the difference of Myers-Briggs Personality types of different level of associates at different levels of work performance. The universe of the sample consisted of middle level management and lower level management out of which a sample of 120 associates was drawn from two companies. The sample distribution was as follows:



Figure 1: Showing Sample Distribution

The associates taken in the sample were in the age range of 20-55 years.

The Myers- Briggs Type Indicator (I. Myers & K. Briggs, 1940) was used for measuring personality and Performance Evaluation form developed by authors was used to access the work performance of the associates. The performance of the associates is measured by their superiors on five- point scale ranging from very high to very low on thirteen performance criterion. The performance criterion were productivity, fast delivery, error less delivery, discipline, punctuality, leadership qualities, initiative, innovation, knowledge base, being a team player, crisis handling, going beyond assigned job and ready-to- do attitude.

Results and Discussion

Multiple Analysis of Variance was applied to see the significant difference amongst the various personality traits of low and high performers. The results of the study reveal that the associates who are very high on work performance are significantly higher on Sensing $F(3, 120)= 2.77, p<.05$ (Table 1) and Judging $F(3, 120)= 3.23, p<.05$ (Table 1) as compared to low work performers, however the low performers are significantly higher on Intuition $F(3, 120)= 2.77, p<.05$ (Table1) and Perception $F(3, 120)= 3.23, p<.05$ (Table1) as compared to very high work performers.

Sensing and Intuition are the information-gathering (perceiving) functions. They describe how new information is understood and interpreted. Individuals who prefer sensing are more likely to trust information that is in

Table1. Scores of Associates on Sensing, Intuition, Judging, Perceiving, across various Performance Levels

Work Performance	Low Performance	Moderate Performance	High Performance	Very High Performance	F
Sensing	13.35a	13.72ab	14.40ab	15.91b	2.77*
Intuition	12.64b	12.27ab	11.59ab	10.08a	2.77*
Judging	13.93a	15.89ab	16.63b	16.68b	3.23*
Perceiving	8.07b	6.11ab	5.37a	5.32a	3.23*

*p < .05, Means with differing subscripts within rows are significantly different at the p < .05 based on Duncan Multiple Range post hoc paired

the present, tangible and concrete. They tend to distrust hunches that seem to come out of nowhere. They prefer to look for details and facts. On the other hand, those who prefer intuition tend to trust information that is more abstract or theoretical, that can be associated with other information (either remembered or discovered by seeking a wider context or pattern). The meaning is in how the data relates to the pattern or theory. As is evident from the results the very high performers are the ones who trust information that is present, tangible and concrete, while the low performers go more by their hunches.

The Judging and Perceiving are the life styles means the ways we organize and structure our lives. A judging lifestyle is decisive, planned and orderly, likes clear limits and categories, handles deadlines, plans in advance, and may seem demanding, rigid and uptight. A perceiving lifestyle is flexible, adaptable and spontaneous, likes freedom to explore without limits, meets deadlines by last minute rush, may seem disorganized, messy or irresponsible. As the results show that the associates very high on work performance are the people in the judging lifestyle who are decisive, planned

and orderly. While the low performers adapts perceiving lifestyle and are disorganized, messy or irresponsible.

The results further revealed that the low performers and high performers were not different on their extraversion-introversion, and thinking-feeling personality orientation. This means these traits cannot differentiate between low and high performers. Also, there was no difference in the work performance of different level of associates.

Correlation and regression analysis was done on MBTI personality dimensions with work performance (Table 2). The results reveal that Sensing ($r(118)= 0.216, p<.05$) has significant positive correlation with work performance and Intuition ($r(118)=-0.216, p<.05$) has significant negative correlation with work performance (Table 2). Further the regression analysis also strengthened the negative relation of intuition with work performance ($R^2 = .08, p<.05, Table 2$).

In the quest to identify high performing personality types, the cross tabulation of work performance was done with the Sensing (S) -Intuitive (N) and Judging (J) -Perceiving (P)

Table 2. Correlations and Regression of MBTI with Work Performance.

Correlations of Personality Dimensions with Work Performance			
	SENSING	INTUITION	
Work Performance	.216*	-.216*	
*= $p<.05$, Analysis based on $N=120$			
Regression of Work Performance on Personality Dimensions			
Work Performance	B	SE B	β
INTUITION	-.644	.305	-.206
$R^2= .08$ ($ps <.05$)			
Rank Correlations of Personality Types with Work Performance			
	TYPES		
Work Performance	-.216*		
*= $p<.05$, Analysis based on $N=120$			
Categorical Regression of Work Performance on Personality Types			
Work Performance	B	SE B	β
TYPES	-.280	.089	-.196
$R^2 = .078$ ($ps <.000$)			

Table 3. Cross Tabulation of Work Performance and Personality Types

	TYPES				χ^2
	SJ	SP	NJ	NP	
Low Performance	11	2	5	0	19.01*
Moderate Performance	13	3	8	4	
High Performance	15	4	8	0	
Very High Performance	36	4	7	0	

*p<.05

Table 4. Clusters of Work Performance (Entered as Continuous Variable) on Personality Types (Categorical Variable)

Work Performance	Mean (SD)	SJ		SP		NJ		NP	
		Freq- uency	%	Freq- uency	%	Freq- uency	%	Freq- uency	%
Cluster 1 Low Performers	39.82 (12.79)	0	.0%	13	100.0%	28	100.0%	4	100.0%
Cluster 2 High Performers	45.05 (13.94)	75	100.0%	0	.0%	0	.0%	0	.0%

types combined together i.e. SJ, SP, NJ, NP. Chi –square statistics was also calculated which is found to be significant. This means that the associates with the SJ, SP, NJ and NP personality type differ significantly on their performance ($\chi^2 (120)= 19.01, p<.05$, Table 3). Further the scrutiny of Table 3 revealed that the associates with the combination of SJ type are significantly better performers than the associates with the other personality types. These results further validate through Spearman rank correlations between the personality types and work performance groups where personality type SJ was coded as 1, SP was coded as 2, NJ was coded as 3, and NP was coded as 4. The very low work performance was coded as 1, Low work performance as 2, moderate work performance as 3, high work performance as 4, and very high work performance was coded as 5. Table 2 shows a significant negative correlation ($r (4)= -.216, p<.05$) between the work performance groups and personality types. This means the individuals with the SJ personality type are high on performance. Categorical Regression was further applied to

identify whether low or high performance can be predicted through personality types. The results in Table 2 show significant regression of personality types on work performance ($R^2 = .078, p<.05$). The negative beta value indicates the negative relation between personality types and work performance. The personality type codes as mentioned above shows that SJ is coded as 1, followed by SP as 2, NJ as 3 and NP as 4. This means the individuals with personality type of SJ are higher performers. To validate these results work performance was entered as continuous variable and the performance clusters were identified. Table 4 shows the two identified clusters of performance scores which differ significantly from each other. Table 4 shows the detailed distribution of personality types in these clusters and as shown in table cluster 1 comprise of SP, NJ, and NP personality types, however cluster 2 comprise of only SJ personality type and are significantly better performers as compared to cluster 1 personality types.

Overall the study found that the individuals with the SJ type are significantly better

performers as compared to SP, NP, and NJ personality types. SJs are described as ‘The Realistic Decision Makers’ by Briggs and Myers (1998). According to them such people are seen as seeking order in their environment, solving problems by relying on past experiences and despising ambiguity. In education, research they are found to be more successful on performance based assessments of competence rather than test based assessments. According to Myers et al. (1998) SJs core needs are for group membership and responsibility. They need to know they are doing the responsible thing, value stability, security, trust hierarchy and authority. SJs tend to look at the practical applications of what they are learning. They know how things have always been done and anticipate where things can go wrong. SJs have a knack for attending to rules, procedures and protocols.

Also the individuals do not differ in their work performance with respect to E-I (extraversion and introversion) and T-F (thinking-feeling) dimensions of personality. So in all an individual with a personality type of ESTJ, ISTJ, ESFJ, and ISFJ would be significantly better performers in the organizations and therefore can be considered as the best hires.

The major characteristics of these performing personality types are:

ESTJ	ISTJ	ESFJ	ISFJ
<ul style="list-style-type: none"> • Practical, Realistic, Decisive, Quickly move to implement decisions • Organize projects and people to get things done • Take care of routine details • Forceful in implementing plans • Serious and responsible in relationships 	<ul style="list-style-type: none"> • Quiet, Serious, Thorough, Dependable • Practical, Realistic, Responsible • Logical decision maker, Maintain order • Value tradition and Loyalty 	<ul style="list-style-type: none"> • Warmhearted, Conscientious, Cooperative • Work with determination • Like to work with others to complete task accurately • Loyal, Empathetic • Enjoy variety and adapt well to routine 	<ul style="list-style-type: none"> • Quiet, Friendly, Responsible and Conscientious • Committed, Steady, Thorough, Patient and Accurate • Work with steady energy to complete jobs fully on time • Take role and responsibilities seriously and want others to do the same

Figure 2: Showing Personality Characteristics of ESTJs, ISTJs, ESFJs, and ISFJs.

The results are supported by the study of Mount et al. (1994) where the preponderance of evidence shows that individuals who are dependable, reliable, careful, thorough, able to plan, organized, hard working, persistent and achievement oriented tend to have higher job performance in most if not all occupations. Lunenberg (1992) found that the factors of dominance, imagination, self-sufficiency, and warmth were related to above-average performance. Baute (2000) in a study found that factors of emotional stability, utilitarianism, practicality, and traditionalism were related to high performers. Baute found that high performers were more tough-minded, resolute, unempathic, more utilitarian, objective, unsentimental, more grounded, practical solution oriented, more emotionally stable, adaptive, mature, more traditional, attached to the familiar, and more accommodating, selfless, and agreeable.

Conclusion and Managerial Implications

Hiring the best quality associates has always been the biggest concern and quest for managers in the business world and yet bigger challenge they face is how to ensure that they are hiring the best performing quality individuals? Many researchers have focused on to differentiating them on the basis of their personality traits but still there is a dearth of work to establish the clear difference amongst the personality traits of high performing and low performing associates. This study flashes light on identifying these performing traits using MBTI framework. Apparently the results of this study show that the associates having sensing and judging personality orientation are better performers irrespective of their level in the managerial hierarchy. Also the personality orientation on Extraversion-Introversion and Thinking –Feeling does not differentiate amongst the high and low performing associates. Further the study revealed that the individuals with the personality type of Sensing- Judging (SJ: The Realistic Decision Makers) are significantly better performers as compared to SP, NP and NJs. According to Myers et al. (1998) SJs core needs are for group membership and responsibility. They need to know they are doing the responsible thing, value stability, security, trust hierarchy and authority. SJs tend to look at the practical applications of what they are learning. They know how things have always

been done and anticipate where things can go wrong. SJs have a knack for attending to rules, procedures and protocols. This also indicates that individuals possessing personality type of ESTJ, ISTJ, ESFJ, or ISFJ might be better performers. Managers can use the results of this study in combination with other parameters to identify high performers. These traits can be measured through using personality constructs measuring these traits or by conducting situation reaction analysis which might reflect these traits and types. It is further suggested to conduct more such studies to clearly establish the relationship between the behavioral orientation and performance, so that performers can be classified straight away.

References

- Arneson, S., Millikin-Davies, M., & Hogan, J. (1993). Validation of personality and cognitive measures for insurance claims examiners. *Journal of Business and Psychology* 4: 459-473.
- Barrick, M. R., Mitchell, T. R., & Stewart, G. L. (2003). Situational and motivational influences on trait-behavior relationships. In M. R. Barrick & A. M. Ryan (Eds.), *Personality and work: Reconsidering the role of personality in organizations* (pp. 60–82). San Francisco: Jossey-Bass.
- Barrick, M. R., Stewart, G. L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology*, 87, 43-51.
- Barrick, M. R., Stewart, G. L., Neubert, M., & Mount, M. K. (1998). Relating member ability and personality to work team processes and team effectiveness. *Journal of Applied Psychology*, 83, 377–391.
- Barrick, M.R. and Mount, M.K. (1991) The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44: 1-26.
- Barry, B., & Stewart, G. L. (1997). Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology*, 82, 62–78.
- Baute, P. (2000). *Using psychological screening to select top performers for firefighting*. Retrieved from <http://paschalbaute.com/firefighting.htm>.
- Bradley, J. H., & Hebert F. J. (1997). The effect of personality type on team performance. *Journal of Management Development*, 16, 337-353.
- Davis-Blake, A., & Pfeffer, J. (1989). Just a mirage - The search for dispositional effects in organizational research. *Academy of Management Review*, 14, 385–400.
- Day, D., & Silverman, S. (1989). Personality and job performance: evidence of incremental validity. *Personnel Psychology*, 42, 25-36.
- Devito Da Cunha, A. & Greathead, D. (2004). *Code review and personality: Is performance linked to MBTI type?* Technical Report Series- CS-TR-837. University of Newcastle upon Tyne. <http://www.cs.ncl.ac.uk/publications/trs/papers/837.pdf>
- Dunn, W. S., Mount, M. K., Barrick, M. R., & Ones, D. S. (1995). Relative importance of personality and general mental ability in managers' judgments of applicant qualifications. *Journal of Applied Psychology*, 80, 500–509.
- Fitzgerald, C., & Kirby, L.K. (1997). *Developing leaders: research and applications in psychological type and leadership development*. Palo Alto CA: Davies Black Publishing, 63-114.
- Furnham, A., & Stringfield, P. (1993). Personality and work performance: Myers-Briggs type indicator correlates of managerial performance in two cultures. *Personality and Individual Differences*, 14, 145–153.
- Goffin, R. D., Rothstein, M. G., & Johnston, N. G. (2000). Predicting job performance using personality constructs: Are personality tests created equal? *Problems and solutions in human assessment*. Norwell, MA: Kluwer Academic Publishers. 249-263.
- Goldberg, L.R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48, 26–34.
- Guion, R. M., & Gottier, R. F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, 18, 135–164.
- Hogan, J., & Hogan, R. (1989). How to measure employee reliability. *Journal of Applied Psychology*, 74, 273-279.
- Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job performance relations: A socioanalytic perspective. *Journal of Applied Psychology*, 88, 100–112.
- Hough, L. M. (1998). Personality at work: Issues and evidence. In M. Hakel (Ed.), *Beyond multiple choice: Evaluating alternatives to traditional testing for selection* (pp. 131–166). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

- Johnson, J. W. (2003). Toward a better understanding of the relationship between personality and individual job performance. In M. R. Barrick & A. M. Ryan (Eds.), *Personality and work: Reconsidering the role of personality in organizations* (pp. 83–120). San Francisco: Jossey-Bass.
- Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. *Personnel Psychology, 50*, 359–394.
- Kieffer, K. M., Schinka, J. A., & Curtiss, G. (2004). Person-Environment Congruence and Personality Domains in the Prediction of Job Performance and Work Quality. *Journal of Counseling Psychology, 51*(2), 168–177. doi: 10.1037/0022-0167.51.2.168
- Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. Borman, D. Ilgen, & R. Klimoski (Eds.), *Handbook of psychology, industrial and organizational psychology, 12*, 333–375. New York: Wiley.
- Kriolowicz, T. J., & Lowery, C. M. (1996). Evaluation of personality measures for the selection of textile employees. *Journal of Business and Psychology, 11*, 1, 55–61, DOI: 10.1007/BF02278255
- Lunenburg, F. C. (1992). The 16PF as a predictor of principal performance: An integration of quantitative and qualitative research methods. *Education, 113*, 68–74.
- McCrae, R. R., & Costa, P. T. (1989). Reinterpreting the Myers-Briggs Type Indicator from the perspective of the five-factor model of personality. *Journal of Personality, 57*, 17–40.
- McHenry, J. J., Hough, L. M., Toquam, J. L., Hanson, M. A., & Ashworth, S. (1990). Project A validity results—The relationship between predictor and criterion domains. *Personnel Psychology, 43*, 335–354.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Mount, M. K., Barrick, M. R., & Strauss, J. P. (1994). Validity of observer ratings of the big five personality factors. *Journal of Applied Psychology, 79*, 272–280.
- Mount, M. K., Witt, A., & Barrick, M. R. (2000). Incremental validity of empirically-keyed biographical scales over GMA and the big five personality constructs. *Personnel Psychology, 53*, 299–323.
- Myers, I. B., Mccaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). *A guide to the development and use of the Myers-Briggs type indicator*. Consulting Psychologists Press Inc. PA: California, 48–49.
- Neuman, G. A., Wagner, S. H., & Christiansen, N. D. (1999). The relationship between work-team personality composition and the job performance in teams. *Group & Organization Management, 24*, 28–45.
- Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin, 124*, 262–274.
- Schuerger, J. M. & Ekeberg, S. E. (1994). 16PF scores and machine operators' performance. *Perceptual and Motor Skills, 79*, 14–26.
- Smart, B. D. (2010). *Avoid Costly Mis-hires*. <http://3forward.com/wp-content/uploads/2010/02/Avoid-Costly-Mis-Hires-by-Bradford-Smart.pdf>
- Stewart, G. L., & Barrick, M. R. (2004). Four lessons learned from the person-situation debate: A review and research agenda. In B. Smith & B. Schneider (Eds.), *Personality and organizations* (pp. 61–87). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology, 44*: 703–742.
- Witt, L. A., Burke, L. A., Barrick, M. R., & Mount, M. K. (2002). The interactive effects of conscientiousness and agreeableness on job performance. *Journal of Applied Psychology, 87*, 164–169.

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