Does Intelligence Always Guarantee Performance?

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Abstract: The current research is intended to explore the individuals’ cognitive intelligence and its impact on their performance. The study examines the intellectual capabilities of employees in reference to the problems that arise due to the interaction with varying job related tasks. Raven’s progressive matrices were used to measure the IQ level of employees. This IQ test was intended to measure the non-verbal intelligence, spatial intelligence, mathematical and logical intelligence of employees. It was hypothesized that individuals’ intelligence does not always guarantee performance. The final data was collected on 300 employees from different organizations of Telecom sector in the city of Lahore, Pakistan. Outcome of the analysis revealed interesting findings that Intelligence Quotient is found to be insignificantly related with individuals’ performance. It shows that IQ alone is not a strong predictor of employees’ performance. Intelligence may ensure a reach to entry level position in an organization but for a sustained position other competencies are of utmost importance. This study may provoke new lines of research in the field of positive psychology specifically.

Keywords: Employees performance, intelligence quotient, telecom sector

INTRODUCTION

In today’s rapidly changing business environment, competition is intensifying and accelerating day by day. Success of organizations has become dependent upon the speed at which they can empower their employees and reach the ultimate customers. In such a complex business environment, the pressures on employees have become intensified, as organizations demand compliance and agility to confront the uncertain situations. To counter the emerging competition, employees need to acquire the multifaceted capabilities in order to work effectively on the global basis. This difficulty of ever-increasing human capital to meet the future demands of the organizations is of crucial nature (Buckingham and Vosburgh, 2001). In an underdeveloped country like Pakistan, identifying such abilities and competencies of the potential employees is very essential for organizations. To fulfill this requirement, capability frameworks accentuate that young people must exhibit abilities or skills that are observable in successful individuals (Gaiduk et al., 2009; Weberg, 2010).

However, “Revealing of potential” depends upon employee’s previous achievements and success rather than on future confrontation. This detection of superior-competencies may not be readily available to the organizations (Spreitzer et al., 1997). Briscoe and Hall (1999) proposed that these competencies are so influential and it may impact employees’ ability to develop the required competencies for optimistic future. In today’s era, organizations call for acquiescence and flexibility from workforce i.e., the potential to be self-sufficient in reaction to-uncertainty and latest demands from their surroundings, “instead of looking for the guidance and growth from organizations” (Hall and Moss, 1998).

Over the past few decades, several empirical studies have acknowledged the linkages between cognitive assessment scores and employee’s performance (Schmidt and Hunter, 2004). Among the general intelligence traits, cognitive intelligence plays a vital role in a person’s performance and behavior (Cote and Miners, 2006). It is in one of the important factors playing key role in the output of the employees. Literature shows a positive correlation between cognitive intelligence and several dimensions of job performance and especially the task performance in most of the jobs (Motowidlo and Van Scotter, 1994; Schmidt and Hunter, 1998; Chan and Schmitt, 2002). The intensity of these linkages has made intelligence “the most important trait or construct” (Schmidt and Hunter, 1986). Limited research on these areas suggests explicit findings and remedies for managers, endorsing the belief that managers should “select on intelligence.” Once, the aforementioned construct is believed that there is a positive relationship between IQ and performance, the intelligent people are perceived to be more successful as compare to less intelligent people.

Some professions require multitasking among employees to handle uncertain situations and complaints and Telecom sector is one of them. It is one of the fastest growing sectors having monopolistic competitive market conditions with reference to
Individuals who scored high on one cognitive test were likely to do well on other tests too. At the same time individuals who have not performed well on one test didn’t do well on other. So he determined that intelligence is a broad cognitive capability that can be measured and numerically represented (Spearman, 1904).

Furthermore, Thurstone (1955) presented a contrary theory of intelligence. He stated that in spite of considering intelligence as a distinct broad ability he determined seven diverse "primary mental abilities" (Thurstone, 1938). The abilities that he defined were: Verbal comprehension, Reasoning, Perceptual speed, Numerical ability, Word fluency, Associative memory and Spatial visualization. He specified that IQ test must assess all the above mentioned factors in order to comprehend the broad cognitive abilities of individuals.

However, among the different theories of intelligence, one of the latest ideas is of Howard Gardner's Theory of Multiple Intelligences. He anticipated that analysis of test scores or numerical depictions of human intelligence are not the accurate and exact representation of individual's abilities. As individuals possess different skills and abilities that are valued within diverse cultures and societies. Therefore, Gardner described eight different intelligences that are: Visual-spatial Intelligence, Verbal-linguistic Intelligence, Bodily-kinesthetic Intelligence, Logical-mathematical Intelligence, Interpersonal Intelligence, Musical Intelligence, Intra personal Intelligence and Naturalistic Intelligence (Gardner, 1983). Emphasizing that intelligence is a broad concept and individuals’ abilities cannot be assessed by analyzing the test scores only.

Moreover, according to Sternberg (1985) intelligence is a "mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one’s own life". Sternberg acceded with Gardner that intelligence is a vast concept rather than just a single and general ability. Instead he implied that some of the Gardner's intelligences are better considered as individual talents. Sternberg anticipated "successful intelligence," that includes three different aspects:

- Analytical intelligence that deals with problem solving abilities
- Creative intelligence that involves the ability to handle new situations by using former experiences and existing skills
- Practical intelligence that refers to the capability to adjust with the changing environment

Though, several attempts have been made by different psychologists in order to define intelligence. However, it is generally defined as “the ability to learn, understand and deal with novel situations. Intelligent person is seen as quick-witted, acute, keen, sharp,
canny, astute, bright and brilliant (Kline, 1991).” Intelligence is a mental ability to make impulses at their early, unfinished phase of formation (Thurstone, 1973). It is also considered as a trait further consisting of several individual abilities of cognitive processes such as perception, learning and reasoning (Spearman, 1927; Terman, 1916). IQ tests judges the individual’s ability to reason and to assume on the basis of logics. IQ tally is a systematized method of evaluating the individual’s ability.

There has been substantial discussion on the literal nature of intelligence. But no ultimate conceptualization has become known so far. Today, psychologists frequently report various diverse theoretical perspectives while talking about intelligence and admit that this discussion is eternal. Individuals have certain unique characteristics that vary from one another in their ability to comprehend difficult ideas, to adjust successfully with the changing environment, to gain knowledge from their experience, to employ in different types of reasoning and to resolve problems by taking thought.

**Employee’s performance:** Employees’ individual performance transform into organizations overall performance, that’s why it is considered as one of the most crucial indicators of measuring organizational performance (Wall et al., 2004). It is often measured by financial records; however performance can also be determined through the composite of expected behavior and task-related traits (Motowidlo, 2003). In fact, performance that is based on absolute value or relative judgment actually depicts the overall performance of the organization (Gomez-Mejia et al., 2007; Wall et al., 2004).

Employees’ performance has been a dominant variable in several researches to date (Viswesvaran and Ones, 2000; Viswesvaran et al., 1996). But as a construct it has received relatively little attention as compared to other pertinent variables (Austin and Villanova, 1992). The reason behind this can be that, we put more emphasis on the broader issues in an attempt to comprehend organizational performance (Addison and Belfield, 2001; Michie and Sheehan-Quinn, 2001). Another issue might be that, researchers tend to focus more on independent constructs whereas performance as a dependent variable tends to be controlled by individuals other than the researchers (Campbell et al., 1993). Job performance measurement is also complicated as it is a complex multifaceted dimension that changes over time and situation (Hough and Oswald, 2001). No matter how it is defined, job performance remains an abstract concept which is socially constructed. Besides, when operationalized it requires so many judgment calls even if it depends on apparently ‘objective’ measures i.e., behavioral counting, organizational records and the like (Murphy and Cleveland, 1995).

Performance has been frequently operationalized by measures over which an individual has limited control like productivity and efficiency confound organizational restraints (Campbell et al., 1993). Output is the one example of a measure which has been used for employees’ performance. But in reality it is a reflection of so many other factors apart from the distinct employee’s efforts. For instance, work environment, availability and standard of equipment and resources, support provided and many more (Waldman, 1994). Performance can be separated from such measures for the reason that it refers to the behaviors that a person exhibits. Whereas, concepts like output and effectiveness reveals the consequences of those behaviors, which may or may not be within the control of the individual (Campbell et al., 1990). Therefore, job performance entails work related behaviors which are: pertinent to organizational goals, within the individual’s control and measurable i.e. observable and score-able (Viswesvaran and Ones, 2000).

Borman and Motowidlo (1993) attributed that technical or task performance is related to the ‘technical core’ of the organization or job. It consists of activities that are directly or indirectly involved with transforming resources into products for economic exchange. Technical or task activities differ significantly from job to job and entail two types of behaviors:

- **Transformation of raw materials into goods and services produced by the organization**
- **Activities which support the core of the organization** (Motowidlo and Van Scotter, 1994)

These tasks are determined by an individual knowledge, skills and capabilities and are role-prescribed. Therefore, task performance is the extent to which employees’ exhibit skills in activities which are formally recognized and which contribute to the organization’s technical core (Arvey and Murphy, 1998; Borman and Motowidlo, 1993).

However, several activities are not included in the realm of task performance but they have a significant impact on organizational effectiveness. Like contextual performance that includes activities intended to maintain the interpersonal and psychological environment that allows the technical or task core to operate. Such contextual activities are rarely role-prescribed and are common in most if not all jobs. These activities depend upon the motivational and pre-dispositional variables i.e., personality.

In general, task performance is deemed as role prescribed (Katz and Kahn, 1978) whereas contextual
Performance is considered discretionary. In comparison, task performance entails both job-specific and non-job specific task capabilities along with the attributes of written and oral communication, supervision and leadership, management and administration. On the other hand, contextual activities support the context or environment within which the technical core of the organization must function. The main emphasis is on the initiative, support and persistence shown rather than the technical proficiency demonstrated.

Borman and Motowidlo (1993) and Organ (1997) attributed that contextual performance makes a vital contribution to both individual and organizational performance. Supportive and rigorous behavior adds significant value to the organizational efficacy by facilitating uncertain situations and providing general assistance to the organization (Bateman and Organ, 1983). It provides support to the broader organizational, social and psychological environment of the organization within which the technical core of the organization works (Motowidlo and Van Scotter, 1994; Smith et al., 1983). Besides, it also assists in the attainment of organizational goals by facilitating communication, lubricating relationships and reducing tensions or emotional disruptions (Arvey and Murphy, 1998) in a way consistent with skills used for facilitating teamwork (McIntyre and Salas, 1995). However, such contributions are not directly or contractually rewarded (Organ and Konovsky, 1989) but due to their substantial impact on performance evaluations, contextual behaviors have become increasingly important. Their combined effect on organizational operations and performance adds significant value in the success of organizations (Organ, 1990; Podsakoff et al., 1997b; Podsakoff and MacKenzie, 1997a).

Despite the evidence that task and contextual performance are the two distinctive constructs, it remains a fact that the two dimensions are not entirely separate. It seems reasonable to conclude that yet they are related but distinct, so both should be taken into account in any attempt at understanding employee, group or organizational performance. However, the current study only emphasizes on task related behaviors of employees.

**Intelligence quotient and employees’ performance:**

Literature on intelligence and job performance correlation depicts that; “intelligence” is assessed by several psychometric measures that are frequently known as “IQ tests”. These IQ tests were intended to evaluate the individuals’ cognitive capabilities and functioning i.e., person’s aptitude to learn, ability to remember, apply, reason, think and abstract. More specifically, IQ tests usually consist of verbal IQ score based on six subsets-information comprehension, arithmetic, similarities, digit span and vocabulary. Whereas performance IQ score were based on five subsets i.e., digit symbol, picture completion, block design, picture arrangement and object assembly. However, among the different IQ tests the most commonly used are Raven's Progressive Matrices, the Armed Services Vocational Aptitude Battery, Wechsler’s Adult Intelligence Scale and the Wunderlich Intelligence Test. Various other IQ tests have been also used by different researchers, which are not commonly considered as IQ tests, because of their high association with explicit measures of IQ.

Intelligence is deemed as a strong determinant and even positively correlated with several essential outcomes in life. Like education, occupational attainment and job performance (Gottfredson, 1986; O'Reilly and Chatman, 1994; Schmidt et al., 1992). In academic literature, the association between intelligence and these vital outcomes has gained significant attention and are hotly discussed in the public realm (Fraser, 1994; Hernstein and Murray, 1992; Lane, 1994). However, the most primeval questions regarding the association between intelligence and performance, is frequently debated in several research studies.

Cognitive intelligence is an important indicator of employees’ better performances leading to better organizational performance. It also indicates the specialized part of general intelligence which reflects the learning about certain cognitive processes such as memory. It has positive relation with many organizational dimensions such as task performance and organizational citizenship behavior. Cognitive intelligence boosts the task performance, by having the knowledge of facts, procedures and rules significant to perform a particular task (Cote and Miners, 2006).

Hunter and Schmidt (2004), depicts that employees with higher level of intelligence excel better. As they not only learn about their jobs but also keep on learning and reasoning once on the job. In today’s rapidly changing world, no particular training program can ever prepare employees for all the uncertain situations to come. Employees must endure to learn on their own, by applying their old knowledge to new situations, through proper planning, dealing with problems via reasoning and thinking to find out remedies. Job performance is enhanced through higher levels of intelligence, as they endow more capability for constant self-instruction and independent problem solving when on the job. Scholars have not found anything like family wealth, long experience, or a favorable personality, that can be replaced with for the ability to get the work done.

Research shows that, the most difficult jobs require the most aspects like: reasoning, planning, decision making, constant updating of knowledge, self-direction
and gathering, combining, analyzing and communicating-written, oral, behavioral, or pictorial. They also involve dealing with uncertain situations, pinpointing difficulties and responding to them rapidly. These complex jobs also entail many obligations, time pressure, working under distractions and emotional stress, all of which calls for fast and effective reasoning. By contrast, moderately complex jobs frequently involve simple information processing: coding, decoding, recording, identifying and recalling. On the other hand, simple jobs are extremely directed, monotonous and involve patience for hostile physical situations instead of emotional stress only. The correlation between a job’s particular mental prerequisites and its overall complexity explains why the importance of cognitive ability is rising to measure job performance, due to the sophisticated nature of certain jobs. Intelligence makes a big difference, when jobs involve more complex information processing.

Literature reveals that, for predicting employees’ performance IQ scores are mostly used. The relationship between intelligence and performance is best analyzed depending upon the nature of job complexity, with greater effects for more complex jobs (Gottfredson, 2002). Even the subsequent job performance is also predicted by analyzing individuals’ intelligence. Other studies by Hunter and Schmidt (1998), depicts that disparities in the varying characteristics of job performance have enhanced financial impact on the organization, especially when the jobs in question are more complex. As a result, it is discretion not prejudgment, which necessitates employers to strive for more intelligent employees for more analytical jobs.

IQ is generally measured as it is associated with success in a number of life outcomes. Mostly individuals with high IQs end up with a high level of education, having better incomes, perform well on their jobs, have less number of fierce crimes and bliss with a better and healthier life. It is evident that an individual’s intelligence develops from a number of traits and factors. Few of them are reading, comprehension, vocabulary and spatial relations. But this is not all that goes into it. Others are physical intelligence, conversational intelligence, social intelligence, survival intelligence and the swing of others that go into everyday life. These vital characteristics are not always considered into intelligence tests. Wherever academics are involved, a typical standardized test indeed gets the expected results. But as it is obvious that these testing processes make certain omissions, so it must not be considered as a good measure of general intelligence.

Soon, the soundness of IQ for assessing performance was summoned because it ignored situational factors i.e., upbringing and breeding, cultural settings while analyzing individuals’ performance (Riggio et al., 2002). Perhaps, Philosophers began to assume that IQ tests may not cover all the mental abilities of person but also it is assumed that these competencies may overlap within individual.

Sternberg (1986) judged that cognitive abilities do not inform us more about employee’s behavioral outcomes in everyday life and provided number of reasons behind the failure of intellectual people. Individual become unsuccessful because of lack of motivation, lack of impulse control, lack of perseverance, using the wrong abilities, inability to translate thought into action, inability to complete tasks, failure to initiate, fear of failure, misattribution of blame, excessive self-pity and dependency, floundering in personal difficulties, distractibility and lack of concentration, lack of balance between critical, analytical thinking and creative, synthetic thinking. So, he endorsed that IQ is not the only thing to be measured about an individual. It ignores several vital competencies that may result in significant achievements. IQ provides authenticity about person’s competency to evaluate and solve problem which is very useful, but it fails to measure several other key proficiencies.

Thus, based on the foregoing arguments it is assumed that individual’s intelligence does not always assure performance. Therefore it is proposed that:

**Proposition 1:** Intelligence Quotient (IQ) does not always guarantee employees’ performance.

**METHODOLOGY**

The research design of this study includes quantitative method of analysis and study on the employees of different organizations related to the telecom sector of Pakistan. An exploratory and explanatory research is conducted to determine that what effect does intelligence quotient has on employees’ performance. A sample of 300 employees was selected from different organizations of telecom sector, by using simple random sampling technique. Survey instrument (questionnaire) was used for the current study in order to collect the data from the sample. The response rate was almost 94% as only 16 questionnaires were discarded from a total of 300 questionnaires for being filled incompletely.

A well-structured research questionnaire was used through online survey for the data collection. Raven et al. (2000) scale was adopted to measure Intelligence Quotient (IQ). The internal reliability of IQ measure (60 items) resulted in α value of 0.88. The reliability of the scale has been checked and proven to be optimal by number of studies. Raven’s progressive matrices are used to measure the IQ ability of employees. This IQ test was intended to measure the non-verbal intelligence, spatial intelligence, mathematical and logical intelligence. The IQ test is based on geometric-
analyze the significance of the model. And coefficient of determination, adjusted $R^2$ is calculated to determine the percentage of variations explained by the independent variables in the model.

The results of the derived model of employees’ performance shown in Table 2 demonstrate that IQ is not significantly related with employee’s performance ($0.746$, $p>0.05$) and it is not considered as a strong determinant of performance with regression analysis ($t = 0.324$), hence accepting the proposed hypothesis.

**RESULTS AND DISCUSSION**

Previous research studies have revealed that intelligence is considered as a strong predictor of performance and it is believed that intelligent people will result in enhanced performance. However, the current study reveals that intelligence does not always ensure performance and it is affected by many other factors. The results of the study show that intelligence is insignificantly related to performance, thus proving the assumed fact that intelligent people does not always guarantee success.

Intelligence offers no benefit, if a person itself is not motivated to make use of it. External motivational sources tend to be ephemeral whereas, internal sources are more likely to produce consistent performance. Often at workplace, individuals’ habitual impulsiveness gets in the way of their optimal performance. They do not make full use of their intellectual resources to accept the problem rather go on with the first solution that comes in their mind. Intelligent people result in poor performance as they are unable to use the appropriate skills required to perform the particular tasks in which they are engaged. They lack the ability to translate their thoughts into action. They come up with good ideas but are unable to do anything about them as they are more concerned about the means of getting things done rather than ends. Perhaps it is the fear that they are incapable of performing the particular task and becoming hopelessly involved in detail.

Sometimes, intelligent people fail to reach peak performance because they avoid the most important challenges in their life due to the fear of failure and commitment. They are unable to take initiative and seek for minor tasks in order to put off the major ones. Ultimately, they start blaming themselves and others for even the slightest mishap and feel sorry for themselves rather than making efforts necessary to overcome the problems. They start expecting from others to do it for them and feel excessive dependency that results in low motivation to perform. Even some intelligent people have very short attention span and lack of concentration. They fail as they let their personal difficulties interfere grossly with their work and get detracted. Maintaining a proper perspective is often difficult for them. Lack of self-confidence is another
major reason that hinders the person’s ability to get things done. Conversely, individuals with too much self-confidence may not know when to admit they are wrong or in need of self-improvement. So they need to maintain a balance between critical, analytical and systematic thinking, in order to learn that what kind of rational is expected from them in different situations.

Intelligence is often determined by individuals’ creativity and it is regulated by individual attributes, personalities and the situational circumstances. Intelligence differs based on the measures of innovation, preferences for complexity, conceptual confidence and flexibility prevailing in the organization. It is not only related to the individuals’ extent of knowledge regarding a particular task but also the way in which it is stored and accessed. A creative employee must have practical knowledge in order to excel.

In a developing country like Pakistan, as far as telecom sector is concerned employees are engaged in monotonous and repetitive jobs. Certain Standard Operating Procedures (SOP) are defined by the high authorities indicating how to perform the specific task or how to react in a particular set of circumstances. Decision making is often discouraged among employees. Mostly higher authorities decide that which particular individuals can participate in different decision making processes and up to what extent their ideas may shape organizational actions. Moreover, telecom sector has a bureaucratic and team based structure consisting of activities like task distribution, rules and regulations that are directed towards the attainment of organizational goals. So, all these factors clearly depict that the workplace environment provided by the telecom sector restricts the employees’ performance even possessing high IQ levels.

Intelligence is also affected by the novelty of the problems. In case of routinized working environment where problems are already familiar, employees’ previous experience is enough to solve the problems that restrict the individual’s ability to solve problems creatively. Whereas, situations in which the problems are new and challenging, allows the employees to create and appraise possible solutions. This shows that when tasks are empirical, intelligence is favored. Thus, when situations are new, unfamiliar or different, employees depend less on their already learned behaviors and rather effort to attain new information or reprocess prevailing information in new ways that enables creativity.

Intelligence quotient fails to predict employees’ performance as organizations vary in their organizational structure, complexity and task related understanding. Employees will be more creative when they will feel motivated, essentially by the attentiveness, enjoyment, satisfaction and challenge of the task itself and not by the external pressures. Individuals’ intelligence has a determined pattern of characteristics like openness to experience, intellectual curiosity, aggressiveness, freedom of decision making and impulsiveness. If all these characteristics are restricted by the organizational structure employees with high IQ level will be less likely to perform well at their jobs. Employees’ intelligence results in enhanced performance only when they have high intrinsic motivation and personal orientation.

**CONCLUSION**

The current study was conducted to explore the association between Intelligence quotient and employees’ performance, among the employees of telecom sector of Pakistan. Past research has indirectly or explicitly proposed that intelligence quotient is correlated with employees’ performance. However, the result of this study reveals that although majority of the employees in the telecom sector have high IQ level but still they are unable to perform well. Consequently, it is evident that individuals with high IQ do not always guarantee success.

Individuals with distinct degrees often fail to implement what they have learnt. Even the most intelligent people sometimes fail, not because they don’t have the necessary skills, but what they lack is “emotional fitness”. Good marks can open different opportunities but it is the “hard work” that will sustain individuals at the top. They need to understand the fact that whatsoever they are born with, is not sufficient in order to be successful. Intelligent people can succeed if they carefully manage their “logic of thinking” or in other words their ability to perform beyond expectations. Simply we can say that “intelligence without commitment is meaningless”. It does not matter how many distinctions individuals have but what matters is how they use them. It doesn’t matter how less talented they might be, but what matters is how hard they train and discipline themselves in and outside the field.

**REFERENCES**


