A Study of Management Skills with Indian Respondents: Comparing their Technical, Human and Conceptual Scores Based on Gender

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There are nearly 1.5 billion people in India and over thirty percent of them are well educated and can speak fluent English. This means the world relies on them since Indians provide an educated workforce for today's competitive and technology-driven workplace. As such, Indian men and women are seen in professional and middle management ranks in various industries across the globe. This study focused on the technical, human and conceptual skills of a selected number of respondents from India to see if gender differences can be a factor. The results of 200 respondents show that these men and women have significantly different skills. Women have an extremely high score on the technical and human skills and men have a high score on the conceptual skills. Implications for researchers, managers, and human resource professionals are presented.

INTRODUCTION TO MANAGEMENT

The modern workplace for most firms can be very diverse as the workforce today is filled with people from many different cultures, including Indian men and women. As such, public and private administrators must become effective managers of individuals with diverse cultures, backgrounds, and interests (Mujtaba, 2010). Of course, "this necessity grows out of the relativity of values and the pluralization of society" (Cooper, 1998, p. 51). "Beginning in the early 1990s, a group of researchers, with funding from the U.S. Army and Department of Defense, set out to test and develop a comprehensive theory of leadership based on problem-solving skills in organizations" (Northouse, 2004, p. 39). While they offered some rudimentary findings, the problem-solving skills needed today are constantly changing depending on the economy, society, and public policy. As such, the research continues for these skills since today's leaders must be effective leaders and managers by having relevant technical, human, and conceptual skills based upon their rank in the leadership hierarchy (Kaifi and Mujtaba, 2010; Mujtaba, 2007). Therefore, this study focuses on understanding the management skills (technical, human, and conceptual) of Indian respondents.

Success in leadership requires a continuous quest for ethical and skilled professional employees and managers (Reischl, Cavico, Mujtaba, and Pellet, 2010). At a minimum, the three basic skills that managers typically use are technical, human, and conceptual; and the proportion of one's time spent in these areas may change as managers move up the hierarchy (Katz, 1955). For example, senior managers may not spend as much time in technical functions as those who are in first-line management. Top managers tend to spend more time using their conceptual skills.

As emphasized by most management scholars, research has shown that education and experience help managers acquire relevant managerial skills that allow them to perform their jobs effectively, especially conceptual, human, and technical (Clem and Mujtaba, 2010). Jones and George (2009, pp. 17-18) provide the following definitions for human, technical, and conceptual skills:

1. *Technical skills* are job-specific knowledge and techniques. The specific kinds of technical skills depend upon the manager's position in the organization.
2. *Human skills* include the ability to understand, alter, lead, and control the behavior of people and groups. The ability to communicate, to coordinate and motivate people, is the principal difference between effective and ineffective managers.
3. *Conceptual skills* include the ability to analyze a situation and distinguish between cause and effect. Senior level managers require high conceptual skills because their primary responsibilities are planning and organizing the long-term vision of the organization.

Modern managers of a cross-cultural workplace should be able to use these skills as a part of their management style and leadership philosophy. It should also be noted that promotion in the management hierarchy is often linked to a manager's ability to acquire the management skills and competencies that a particular company believes are important.

INDIAN CULTURE: MEN VERSUS WOMEN

With nearly a quarter of the world's population living in India or having a connection with someone from the country, there are many cultures and sub-cultures with which these people are socialized. Culture is a prominent factor in the differences people share, especially in the way men and women are socialized (Kaifi and Mujtaba, 2010a, 2010b; Mujtaba, Maliwan and Atthyuwat, 2010; Mujtaba, 2010). In the case of India, "A variety of socioeconomic factors are responsible for women's lower educational attainment, including direct costs, the need for female labor, low expected returns and social restrictions" (Ghosh et al., 2005, p. 196). Such differences can be critical in effectively managing workplace diversity. Additionally, culture is important because shared values tend to regularize human behavior and make individuals more predictable. Knowing how others perceive and value their environment provides a guide for managers to anticipate behavior and respond effectively (Clem and Mujtaba, 2010). For example, "In traditional societies like India, the circumstances of both individuals and households and access to key social resources are to a large extent structured by family, marriage, and kinship relationships; and girls' enrollment in school is linked to socioeconomic status" (Ghosh et al., 2005, p. 205). This point is becoming increasingly more important as globalization brings distant peoples into closer contact while they face cultural, economical, and legal challenges; and the growth in international trade has dramatically increased people's understanding of the similarities and differences between diverse cultures (Mujtaba and Chen,

2010; Mujtaba, Chen and Yunshan, 2010; Gardenswartz, Rowe, Digh, & Bennett, 2003; Ishii & Bruneau, 1994).

Studies by Munene, Schwartz, and Smith (2000) conclude that the Asian and African cultures tend to emphasize hierarchy, paternalism, and mastery in contrast to egalitarianism, autonomy and harmony. As a matter of fact, "The position of women in traditional Indian society can be measured by their autonomy in decision making and by the degree of access they have to the outside world" (Ghosh et al., 2005, p. 196). Moreover, Asian and African managers often stress reliance on formal rules and superiors in reaching decisions as compared with the cultural profile of people in the United States or most European countries. For example, "Indian workers also manifest a family centered work ethic. Most workers believe that work is necessary and good, primarily for maintaining one's family, providing for the well-being of aging parents, spouse, and children" (Kanungo, 1990, p. 803).

In today's competitive world, understanding and responding to culturally driven behaviors are paramount to succeeding in cross-cultural management because "the people in an organization are crucial to its performance and the quality of work life within it" (Rainey, 2003, p. 219). The changes in the global economy have introduced new gender roles that have made organizations more diverse and full of leaders with different managerial skills.

Gender roles in all societies differ based upon traditions, economic status, and opportunities. In the Indian culture, traditionally men have had more opportunities for acquiring an education which has resulted in men dominating higher ranks in the workforce. Buddhapriya (2009) states, "Although conflict between career and family roles can be a potential source of stress for both women and men managers, it affects women in India more than men because of many reasons," and further states "While social, legal, and economic reforms have helped women to join the workforce in India, the continuing influence of normative attitudes and values have prevented them from altering the perceptions of the society as well as their own regarding their sex-roles" (p. 34). This reality has caused a glass ceiling for women who are unable to move up in an organizational hierarchy. "Large Indian companies seem to be lagging behind when it comes to gender diversity in their top decision-making bodies" (Buddhapriya, 2009, p. 32). Furthermore, "Given the cultural orientations of males in the Indian society where exchanges with the opposite sex are limited, it is likely that efforts at ingratiation will enhance a male superior's favourable demeanour towards female subordinates" (Himanshu, 2009, p. 66). Although the glass ceiling phenomenon exists in many societies throughout the world, India is gradually moving toward a more diverse workforce by encouraging more female students to attend school and learn new skills. "The fact that Indian students are using SNWs [Social networking websites] to understand the business environment, improve job prospects, and participate in formal discussion forums is indicative of their preparedness and zeal to contribute to their future place of work in India or abroad" (Agarwal & Mital, 2009, p. 109). Buddhapriya (2009) explains how family responsibilities have hindered many women from entering the workforce. The author states, "It is a reality that though Indian organizations are a lot more open to the idea of having more women at their top and senior management levels, the talent pool of women candidates at the top level is very shallow," and further states that "Indian organizations must understand that societal expectations and family responsibilities do come in the way of the women professionals and their career decisions" (Buddhapriya, 2009, p. 43). With globalization creating more opportunities, education for Indian men and women has become more prevalent and as a result, several resources have been made available to the Indian children at the societal, educational, and familial levels that may be distinctive to the Indian culture. "These unique cultural resources

include, at the societal level, after-school coaching classes that are regularly attended by many school children of all grade levels as well as hotlines to support young children during exams" (Bodas et al., 2008, p. 400). Interestingly enough, males have more support from their families when compared to females in respect to their educational needs, which may explain why males in India have been able to acquire advanced degrees and dominate the workforce. Furthermore, "With respect to gender differences in test anxiety (or lack of them) and the availability of culturally unique coping resources, it may be noted that parents have been historically more supportive of males with respect to their educational needs" (Bodas et al., 2008, p. 401). By having more advantages such as family support and access to education, it is no wonder that Indian "males have had more access to coping resources within the family as well as society" (Bodas et al., 2008, p. 401). This unfair treatment has led to a volatile workforce where men and women work side-by-side but are treated differently.

Many female Indian workers feel helpless and powerless once they enter the workforce. Kanungo (2009) states that "Workers at all levels of organizations in India seem to manifest a personal sense of helplessness…In their day-to-day work and non-work spheres of life, they exhibit a passive attitude towards their environment," and further emphasizes that "They feel that they can do nothing (in a direct manner) to change their environment" (p. 802). The workers of Indian organizations demand leaders and managers who have high humanistic attributes to help enhance morale and productivity levels because "As individuals, they [Indian workers] feel that they are insignificant, powerless particles of humanity, and, therefore, believe in the futility of their actions" (Kanungo, 1990, p. 802). Thus, it becomes important to learn what dominant skills (technical, human, or conceptual) Indian men and women bring to the workforce.

STUDY METHODOLOGY

The Style Inventory survey instrument provided by Peter G. Northouse (2010, pp. 64-65) was distributed to 400 Eastern-Indians who work for different organizations throughout the Bay Area of California who attended the same Islamic Center. A total of 200 surveys were completed successfully by participants. So a total of 200 responses, which represents a 50% response rate, were used for analysis. Of course, it should be mentioned that small population sample should be seen as a pilot study since it is based on a convenience sampling method which cannot be generalized to an entire population of over one billion people who are very diverse. So the reader should see the generalized statements as simply referring to the specific respondents sampled and not necessarily the entire cultural patterns of all people in India.

Many instruments have been used by different researchers to assess an individual's skills for management and leadership (Katz 1955; Rahman & Yang, 2009; Garman et al., 2006; Buttner et al., 1999; Egbu, 1999; Mumford et al., 2000). Instruments are designed to yield information about an individual's skills that can be used for training and development purposes. For example, Rahman and Yang (2009) explain:

> One of the earliest surveys conducted to ascertain the skills required by senior logistics executives was performed by Murphy and Poist. In this survey they used three sets of skills: business skills, logistics skills and management skills. Business ethics was found to be the top-rated business skill, and personal integrity was found to be very important among management skills, whereas transport and traffic management was found to be the top-ranked logistics skill. (p. 141)

Other researchers have used instruments that linked managerial skills to creativity. "To date, the relationship between managers' creativity and their self and other ratings on managerial skills has not been examined" (Buttner & Gryskiewicz, 1999, p. 229). Regardless of the instrument, many researchers understand the importance of managerial skills when planning, leading, organizing, and controlling.

The skills inventory is designed to measure three broad types of management skills: technical, human, and conceptual. One can score the questionnaire by doing the following. First, sum the responses on items 1, 4, 7, 10, 13, and 16. This is one's technical score. Second, sum the responses on items 2, 5, 8, 11, 14, and 17. This is one's technical skill score. Third, sum the responses on items 3, 6, 9, 12, 15, and 18. This is one's conceptual score.

The research question for this study is: *Do Indian men and women have similar or different orientations in management skills?* For this survey, the higher the overall sum of the scores, the more likely that the participant is better at that skill. The research hypotheses for this study are as follows:

- *Hypothesis1* –Indian men and women will have similar scores for technical skills.
- *Hypothesis2* – Indian men and women will have similar scores for human skills.
- *Hypothesis3* – Indian men and women will have similar scores for conceptual skills.
- *Hypothesis4* – Indian respondents will have similar scores for technical and conceptual skills.

Results

The results demonstrate that these Indians in this sample have high scores on technical skills, followed by average human skills, and low conceptual skills. Indian females, responding to this study, seem to have high scores on technical and human relations skills that allow them to effectively work with others at all levels. The first hypothesis, "Indian men and women will have similar scores for technical skills" cannot be supported as Indian women have a significantly higher score (t= -29.76; p-value < 0.001) for technical skills. Therefore, the first hypothesis is rejected.

TABLE 1
INDIAN RESPONDENTS' MANAGEMENT SKILL SCORES (ST. DEVIATIONS)

	Number	Technical	Human	Conceptual
Indian Men	100	23.26 (1.91)*	15.99 (2.5)	15.70 (2.08)
Indian Women	100	29.4 (0.78)*	24.22 (0.92)	14.05 (1.13)
TOTAL	200	26.33 (3.4)	20.11 (4.53)	14.88 (1.86)
	*t = -29.76; p < 0.001			

The second hypothesis, "Indian men and women will have similar scores for human skills," cannot be supported as women have a significantly higher score on human relation skills (as presented in Table 2). Therefore, the hypothesis is rejected.

TABLE 2
INDIAN MEN AND WOMEN HUMAN SKILLS

	Sample Size	Mean	Standard Deviation
Men	100	15.99	2.5
Women	100	24.22	0.92

t = -30.89; *p* < 0.001

The third hypothesis, "Indian men and women will have similar scores for conceptual skills," cannot be supported as men have a significantly higher score (as presented in Table 3). Therefore, the hypothesis is rejected.

TABLE 3
INDIAN MEN AND WOMEN CONCEPTUAL SKILLS

	Sample Size	Mean	Standard Deviation
Men	100	15.7	2.08
Women	100	14.05	1.13

t = 6.97; *p* < 0.001

The fourth hypothesis, "Indian respondents will have similar scores for technical and conceptual skills," cannot be supported as they have a significantly higher score for the technical skill (as presented in Table 4). Therefore, the hypothesis is rejected.

TABLE 4
INDIAN TECHNICAL VS. CONCEPTUAL SKILLS

	Sample Size	Mean	Standard Deviation
Technical	200	26.33	3.4
Conceptual	200	14.88	1.86

t = 29.54; *p* < 0.001

IMPLICATIONS AND RECOMMENDATIONS

This study has demonstrated that Indian women surveyed in this research have significantly higher scores on technical and human skills, and Indian men have a slightly higher score on the conceptual skills. Furthermore, these Eastern Indian respondents as a group have a significantly higher score on the technical skills compared to their conceptual scores. India is a country that has successfully embraced technology and implemented technology in the classrooms. Young Indians are exposed to technology, the internet for research, and social networking websites that prepare them for the cyberspace workplace. This may explain why Indians scored high on the technical skills. Many countries such as the United States outsource services to India because of their technological skills and the ability of over 300 million college educated professionals who communicate fluently in English. As a matter of fact, "the successful technology manager is

often distinguished not by command of any single set of knowledge or skills, but by an ability to master changing demands—to learn, in other words" (Austin, Nolan & O'Donnell, 2009, p. 338).

The modern workplace for a multinational firm can be very diverse as the workforce today is filled with people who may have different management skills. Kaifi (2009) explains how using multiple frames to evaluate an organization will help a manager understand complex issues within an organization and it will result in continuous improvements (p. 94). The glass-ceiling phenomenon in Indian organizations needs to be eradicated as women such as Meg Whitman of eBay have proven to be successful managers. "Despite high-profile success stories of female CEOs such as Meg Whitman of eBay, only a handful of Fortune 500 firms in 2008 have a woman in the top spot. Consequently, concern remains about the progress women are making" (Wyld, 2008, p. 83). Indian women bring diverse views and perspectives with an orientation toward top management positions because of their high human skills when compared to their male counterparts who are more suited for supervisory management positions. According to Mahat (2008), when Eastern Indian families migrate to the United States, they bring with them their traditional culture and customs which is beneficial for American organizations who are seeking managers with high human skills. These Indian female respondents in this sample have demonstrated that they high have human skills which can assist them for top management positions. Effective managers and leaders influence others to take action. Most effective leaders and managers have a high degree of skills in all areas (conceptual, human, and technical) that allow them to assist and lead organizations (Mujtaba, 2007).

LIMITATIONS

There are some limitations to this study and one is the limited amount of responses from each group. This survey can be combined with other more comprehensive instruments to enhance and confirm the results. Future studies can duplicate the research with a greater number of Indian participants that are compared to other ethnicities. The fact that this study was conducted with a convenient sample population living in urban areas outside of India was a further limitation. Future studies might control this variable by expanding the research population to include more respondents from various locations and provinces within India. Perhaps different population groups and people working in various industries can be studied separately to see if culture is truly a factor in the management skills of women (and men) professionals. Finally, future researchers should consider translating the survey instrument into Hindi, Panjabi, and other local Indian languages so as to facilitate the test subjects' preferred and dominant reading skills.

CONCLUSION

This study focused on the technical, human and conceptual skills of a selected number of technologically savvy professional men and women Indian respondents. The results show that Indians sampled in this study have higher scores on technical skills. Indian women in this sample scored significantly higher on the human and technical skills compared to their male colleagues. Therefore, women professionals from India can be recruited, promoted, and retained in technically challenging management positions that require product competency and people skills. Assuming the current education climate and continued political stability, India will continue to be a pool of great human resources for companies around the globe in the decades to come.

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