Role of Leadership Skills for Developing Digital Acumen in Information Technology Employees

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Abstract

With the plethora of changes happening in organizations adopting new digital technologies, managing human resources in information technology organizations had never been more challenging. Keeping in mind, a very few literature available on the role of HR in the new digital era, an attempt has been made in this study to explore the role of leadership skills for developing digital acumen in people working in information technology organizations. The study used sequential mixed methodology to explore the insights of subject matter experts, technology leaders and HR professionals to develop an instrument that explored necessary leadership skills for acquiring digital acumen in employees working in information technology companies. The first part of the study was based on exploring narratives of five subject matter experts. The inputs from these experts came out with broad themes and sub-themes that were used for developing the constructs, namely, acquiring digital acumen, adaptability, ambiguity tolerance, teamwork and collaboration and championing leadership. The part two of the study involved the use of the instrument for recording the opinion of 210 respondents working in software development positions in reputed information technology companies in the NCR of Delhi. The results showed that respondent perception on acquiring digital acumen was mediated by the factor championing leadership. Other intervening leadership variables such as adaptability, ambiguity tolerance and teamwork and collaboration exerted their influence on acquiring digital acumen by exercising 'championing leadership' abilities in the organization.

Key Words

Leadership Skills, Acquiring Digital Acumen, Information Technology, Adaptability, Ambiguity Tolerance, Teamwork and Collaboration, Championing Leadership

Introduction

With organizations facing the challenges of digital disruption and cut-throat competition in the global market, managers and HR leaders have to ensure that their employees harness digital acumen so as to create better opportunities for the organization in the competitive landscape. It can be argued from the viewpoint of several think tanks and industry experts that the readiness of the new generation workforce towards digital acumen could emerge as a major differentiator in the highly competitive business scenario (Laurenceau & Sloman, 2015). Other authors such as Macnamara and Zerfass (2015) and Zerfass et al. (2010) were of the opinion that managerial communication and decision making would be influenced by large-scale organizational changes brought about by digital evolution. In a recent paper, business leaders had expressed that digital

acumen of the talent pool in organizations would be playing an instrumental role for instrumenting organizational success (Laurenceau & Sloman, 2015). Alexander (2016) had discussed a similar perspective regarding the growing relevance of digital acumen as an essential competency for public relation professionals. Daugherty et al., (2016a, 2016b) were of the viewpoint that in today's digitally competent manpower would be playing a crucial role to shape the future of businesses and also the way they were being managed by organizations. Taking the evidence regarding the growing concern of several industry experts on the role of digital prowess in the organizational talent pool, an attempt had been made in the present study to explore the role of leadership skills for enhancing digital acumen among the employees belonging to the information technology sector in India.

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Review of Literature

Authors such as Brousell (2019) have described digital acumen as a set of competencies among employees involving their ability to apply and effectively utilize the potential of high-end information technology to develop sustainable new competitive edge in businesses by constantly evolving innovative business decision models and processes, particularly harnessing real-time data for developing advanced business solutions. Digital acumen in today's organization demands its organizational talent pool to be information-empowered and be adaptable to work in teams, demanding highly collaborative work engagements. Brousell (2019) in his study had strongly contended on the growing importance of the organizational leadership cadre playing a crucial role in terms of developing an elaborate understanding of integrating digital technologies in their organizational processes and decision-making perspectives and deploying relevant professional skills for managing their talent pools. According to Chang (2016) in order to strategically emphasize upon the digital needs of the organization, industry leaders are facilitating transformation of traditional employee roles so that the later could inculcate requisite professional skills as well digital orientation in their performance. A recent insight published in Forbes (Monero, 2016) had also highlighted the fact that today's HR leaders are constantly ensuring accelerated adaptation to digitalization acumen in their organizational talents which they believed are also playing important roles in terms of attracting and retaining the best talents in the organization. Authors such as Welch & McAfee (2013) in this context had emphasized on the importance of segregating members from the organizational work teams who had requisite digital acumen for developing digital expertise and proficiency of their teammates and co-workers. On the other hand, Durou et al., (2016) had indicated that the leadership cadre of any organization had a crucial role for facilitating digital transformation. These authors mentioned that such leaders should themselves be instrumental for enhancing digital capabilities among the talent force so that could effectively lead the journey towards organizational digital transformation. In a recent research conducted by Fenlon and McEneaney (2018) indicated that upskilling of employee abilities facilitated the digital agenda of organizations. In this regard, Mathew (2018) indicated that it was essential for corporations to manage a balancing act in the way they acquired and developed their talent pools, particularly with special emphasis on the digital competency profiles.

Based on the above understanding, it has become evident that the leadership role plays a crucial standpoint in terms of establishing digital acumen in the workforce. Fenech et al. (2019) had suggested that an organization's technology and human capital competencies played a crucial role for bringing about digital transformation. Kane et al. (2015) in a previously conducted study had supported a similar opinion regarding the growing importance of leadership and employee digital capabilities for bringing about digital transformation. This view can be further established by the study conducted by Mok and Berry (2016). These authors had indicated that some specific leadership attributes were accountable for facilitating digital acumen in people. These abilities like those of business knowledge, teamwork, employee collaboration, innovative thinking, risk propensity were identified to be crucial for the success of most IT professionals working in the industry. These authors have also coined a term 'leaders of one' as an essential attribute to depict the leadership prowess of their chief information officer (CIOs) and business leaders. On the other hand, Liu et al. (2011) discussed that there has to be a strategic fit among the organizational resources, including employee capabilities facilitating digital transformation and change.

In a recently published article in Forbes magazine, Newman (2018) pointed out that essential leadership abilities needed for digital transformation could be facilitated by sharpening progressive thinking, being change-agile, having the ability to fix problems, risk-taking propensity and also by the ability to harness collaborative partnerships and teamwork at the organizational and team levels. Roe (2018) pointed out the importance of intellectual curiosity and visionary perspectives essential for developing digital acumen in organizations. Sullivan (2017) in her paper had indicated the importance of adaptability, communication, digital literacy and digital vision to be essential for developing digital prowess of employees in organizations. Kane (2018) had claimed the importance of developing new skills and abilities for leading their corporations in their digital journey. The author further discussed the growing importance of collaborative skills, ability to think differently, concern for vision, ability and conditions for experimentation as essential leadership abilities fostering digital acumen.

Considering the empirical implications shown in similar studies, it can be mentioned that authors such as Zeike et al. (2019) had shown that digital leadership skills in senior managers working in information technology organizations had significant influences on their overall well-being.

Based on the above literature, it can be clearly interpreted that most the researchers and industry experts had identified relevant leadership abilities but hardly any one among them had explored whether these leadership capabilities empirically contributed to the digital acumen of people in organizations. Taking this as a major research gap, an attempt has been made in the present study to explore the impact of leadership capabilities for developing digital acumen in employees working in information technology organizations.

Research Methods

The study used sequential mixed methodology using both qualitative as well as quantitative approaches to explore

| Authors | Findings | Implications and Identification of Research Gap |
|-------------------------|--|--|
| Brousell (2019) | Operational definition of digital acumen: set of competencies among employees involving their ability to apply and effectively | Contributing leadership abilities could be identified from the literature review |
| | utilize the potential of high-end information technology business decision perspectives | Literature review does not establish any |
| Mok and Berry (2016) | Business knowledge, teamwork, employee collaboration, innovative thinking, risk propensity were identified to be crucial for the success | abilities and digital acumen (Research gap) |
| Liu et al. (2011 | of most II professionals)Strategic fit between the organizational resources including employee capabilities | |
| Newman (2018) | Sharpening progressive thinking, being change-agile, having the ability to fix problems, risk-taking propensity and also having the ability to harness collaborative partnerships and teamwork | / |
| Roe (2018) | Importance of intellectual curiosity and visionary perspectives essential for developing digital acumen | |
| Sullivan | Importance of adaptability, communication, digital literacy and digita | I |
| (2017) | vision | |
| Kane (2018) | Developing new skills and abilities for leading their corporations in their digital journey | |

the variables pertaining to required leadership skills and digital acumen of employees working in the IT sector. During the first part of the study, five subject matter experts holding senior positions in different IT companies located in the NCR of Delhi were contacted and they were asked regarding their perception towards requisite leadership skills needed in their organizations as well as what they meant regarding digital acumen (interview framework questions developed on the basis of broad parameters identified through literature review matrix, i.e., Table 1). Their narratives were recorded (Bamberg et al., 2011; Hollway & Jefferson, 2008; Wengraf, 2006) and analysed (Freeman, 1993; Salinger et al., 2007) using NVivo 10, through which nodes or themes were identified that were subsequently categorized into node categories or broad themes. These broad themes and themes were subsequently used to develop constructs and their corresponding measures which were then used to develop the research instrument used for the second part of the research.

During the second part, the research instrument developed from the part one of the study was distributed among employees working in various IT companies in and around the NCR of Delhi using an employee database collected from various social network platforms. The respondents were given code words to hide their identity and e-mails/online questionnaires were dropped by randomly picking up employee codes. Although 225 employees were contacted, only 210 responses were considered to be usable for further data analysis.

Findings of Part One of the Study

The narratives collected from the five subject matter experts working in various IT companies were fed NVivo 10 whereby themes and broad themes were identified by using the software (Table 2).

Research Instrument

Based on the broad themes and themes identified from Table 1, the constructs and their corresponding measures were developed (Table 3) with the use of a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = can't say, 4 = agree and 5 = strongly agree).

As the existing literature had clearly indicated that there is a gap in terms of establishing any empirical relationship between leadership abilities and developing digital acumen in an organization, the same was used for conceptualizing the research question and the hypothesis.

• Do the explored leadership abilities such as adaptability, ambiguity tolerance, teamwork and collaboration and championing leadership have any impact on employee 'acquiring digital acumen' in the Indian IT organizations?

The research hypothesis which could be implied from the above research question could be presented as follows:

H₁: Adaptability, ambiguity tolerance, teamwork and collaboration and championing leadership contributed to employee acquiring digital acumen.

The above hypothesis was used to propose the research model (Figure 1) which was explored during the empirical (Part 2) study.

Table 2. Narrative Analysis Using NVivo 10

| Name of the Node (Themes) Identified from Narratives | Per cent Coverage from Source | Node Category (Broad Themes) | Node Category % Coverage of Source |
|--|----------------------------------|---------------------------------|---------------------------------------|
| Flexibility in approach | 14.00% | Adaptability | 61.00% |
| Adapt to situations | 5.00% | . , | |
| Use of creative approaches | 6.00% | | |
| Freedom in projects | 19.00% | | |
| Ease to work in new situations | 17.00% | | |
| Working on unknown areas | 19.00% | Ambiguity tolerance | 65.00% |
| Working in under uncertainty | 17.00% | | |
| Ambiguity as challenge | 9.00% | | |
| Tolerate ambiguity | 12.00% | | |
| Risk taking | 8.00% | | |
| Work in teams | 10.00% | Teamwork and collaboration | 72.00% |
| Team skills | 12.00% | | |
| Collaboration | 13.00% | | |
| Cohesiveness | 12.00% | | |
| Complementing in teams | 17.00% | | |
| Collaboration | 8.00% | | |
| Share leadership | 19.00% | Championing leadership | 85.00% |
| Provide direction (Lead) | 17.00% | | |
| Guide people | 16.00% | | |
| Foster team spirit | 15.00% | | |
| Handle crisis | 18.00% | | |
| Employee understanding of the digital environment of business | 20.00% | Acquiring digital acumen | 75.00% |
| Acquiring ability to adjust with organizational digital strategies | 23.00% | | |
| Work in digital teams | 19% | | |
| Digital know-how | 6% | | |
| Futuristic mindset for working in digital environment | 7% | | |

Source: The authors.

Table 3. Constructs and Measure Items

| Constructs | Measures | | | |
|---------------------------------|--|--|--|--|
| Acquiring digital acumen (ADA) | We are required to have the necessary know-how pertaining to digital applications. | | | |
| 、 , | We are needed to have an understanding of the digital environment of the business. | | | |
| | We are encouraged to adjust with the organization's digital strategies. | | | |
| | People in our organizations prefer to work in digital teams. | | | |
| | We need to have a futuristic mindset for working in a digital environment. | | | |
| Adaptability (A) | People in our organization are flexible in their approaches. | | | |
| | We are easily adaptable to new situations. | | | |
| | We use creative approaches for better adjustment. | | | |
| | We have the freedom to adapt to situations. | | | |
| | We feel comfortable to work in new situations. | | | |
| Ambiguity Tolerance (AT) | We have the ability to work on unknown areas. | | | |
| | We can work under uncertainty. | | | |
| | We look at ambiguity as a challenge. | | | |
| | People in our organization can easily tolerate uncertainty. | | | |
| | We are good at taking risks. | | | |
| Teamwork and collaboration (TC) | People in our organization are good at working in teams. | | | |
| | We have requisite skills to work in teams. | | | |
| | We collaborate with one another while working in projects. | | | |
| | We work as a cohesive unit in our work teams. | | | |
| | We complement each other while working on our assignments. | | | |
| Championing leadership (CL) | We share leadership roles while working on projects. | | | |
| | People in our organization are good at providing direction. | | | |
| | We are good at guiding one another in our assignments. | | | |
| | People in our organization enjoy team spirit. | | | |
| | We are good at managing crisis. | | | |



Figure I. Proposed Research Model Source: The authors.

Findings of Part Two of the Study

Data analysis revealed that the majority out of 210 respondents were male (75%) whereas 25 per cent were female. The age categories of the respondents were as follows: 62 per cent belonged to the age group of 21 to 25 years, 28 per cent belonged to the age group of 26 to 30 years. Only 10 per cent of the respondents belonged to the age category of 31 to 35 years. None of the respondents

belonged to the age groups of 36 to 40 years and above 40 years category. Seventy per cent of the respondents had experience of 0 to 5 years, whereas 30 per cent had experience level of 6 to 10 years. None of the respondents were having experiences above 10 years.

In order to assess the reliability of the instrument (Table 2), Cronbach alpha scores of the five constructs were computed along with the descriptive statistics of the same (Table 4). Table 4 shows that the reliability scores

| Construct Name | Measures | N | Mean | Std. Deviation | Cronbach's Alpha |
|----------------------------|----------|-----|------|----------------|------------------|
| Adaptability | AI | 210 | 3.90 | 0.781 | 0.836 |
| | A2 | 210 | 3.67 | 0.891 | |
| | A3 | 210 | 3.86 | 0.842 | |
| | A4 | 210 | 3.52 | 1.005 | |
| | A5 | 210 | 3.41 | 0.987 | |
| Ambiguity tolerance | ATI | 210 | 4.16 | 0.708 | 0.881 |
| | AT2 | 210 | 4.03 | 0.728 | |
| | AT3 | 210 | 4.09 | 0.676 | |
| | AT4 | 210 | 3.99 | 0.741 | |
| | AT5 | 210 | 3.77 | 0.829 | |
| Championing leadership | CLI | 210 | 3.54 | 1.000 | 0.872 |
| | CL2 | 210 | 3.45 | 1.004 | |
| | CL3 | 210 | 3.57 | 0.894 | |
| | CL4 | 210 | 3.51 | 0.960 | |
| | CL5 | 210 | 3.62 | 0.771 | |
| Teamwork and collaboration | TCI | 210 | 3.77 | 0.772 | 0.789 |
| | TC2 | 210 | 3.36 | 1.026 | |
| | TC3 | 210 | 3.75 | 0.746 | |
| | TC4 | 210 | 3.78 | 0.733 | |
| | TC5 | 210 | 3.82 | 0.639 | |
| Acquiring digital acumen | IDAI | 210 | 3.38 | 1.124 | 0.861 |
| | IDA2 | 210 | 3.34 | 1.143 | |
| | IDA3 | 210 | 3.41 | 1.078 | |
| | IDA4 | 210 | 3.69 | 0.891 | |
| | IDA5 | 210 | 3.79 | 0.807 | |

 Table 4.
 Descriptive Statistics

Source: The authors.

(Cronbach alpha) of the constructs, namely, adaptability, ambiguity tolerance, championing leadership, teamwork and collaboration and acquiring digital acumen (0.836, 0.881, 0.872, 0.789, 0.861, respectively) were well above the prescribed level, depicting that the instrument could be used for further analysis.

The mean score for each construct were calculated by computing the average of the measures pertaining to each construct. In order to identify the factors contributing to each construct, the construct items were then subsequently fed for exploratory factor analysis (EFA) using SPSS 20. As revealed in Table 5, the Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy show acceptable scores of 0.884 depicting the relevance of the data for further factor exploration.

Table 6 represents the rotated component scores of the factors filtered out during the EFA. Factors having

Table 5. KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure | of Sampling Adequacy. | 0.884 |
|-------------------------------|-----------------------|----------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3299.221 |
| | df | 300 |
| | Sig. | 0.000 |
| | | |

Source: The authors.

Table 6. Rotated Component Matrix.^a

| | Component | | | | | | | |
|------|-----------|-------|-------|-------|---------|-------|--|--|
| | I | 2 | 3 | 4 | 5 | 6 | | |
| AI | | | | | | | | |
| A2 | | | 0.776 | | | | | |
| A3 | | | 0.803 | | | | | |
| A4 | | | 0.718 | | | | | |
| A5 | | | 0.611 | | | | | |
| ATI | 0.810 | | | | | | | |
| AT2 | 0.739 | | | | | | | |
| AT3 | 0.826 | | | | | | | |
| AT4 | | | | | | | | |
| AT5 | | | | | | | | |
| CLI | | | | | | | | |
| CL2 | | | | | | | | |
| CL3 | | 0.724 | | | | | | |
| CL4 | | 0.622 | | | | | | |
| CL5 | | 0.615 | | | | | | |
| TCI | | | | | 0.803 | | | |
| TC2 | | | | | 0 / 70 | | | |
| TC3 | | | | | 0.679 | | | |
| TC4 | | | | | 0 7 4 2 | | | |
| | | | | 0.070 | 0.743 | | | |
| ADAI | | | | 0.872 | | | | |
| | | | | 0.878 | | | | |
| | | | | 0.756 | | | | |
| | | | | | | 0 741 | | |
| ADAS | | | | | | 0.741 | | |

Source: The authors.

Notes: Extraction Method: Principal component analysis.

Rotation Method: Varimax with Kaiser normalization.

^a Rotation converged in eight iterations.

component score less than 0.6 were filtered out for further considerations in factor exploration. The EFA revealed that for the construct adaptability (A), the items A2, A3, A4 and A5 were important as their individual rotated component scores were more than 0.6. Similarly for the construct ambiguity tolerance (AT), the rotated components, namely, AT1, AT2 and AT3 were found to be important. On the other hand, for the construct championing leadership (CL) the components found to be important were CL3, CL4 and CL5. For the construct teamwork and collaboration (TC) the measure items (components) TC1, TC3 and TC5 were found to be relevant. Similarly, for the construct acquiring digital acumen (ADA), it was found that the items, namely, ADA1, ADA2 and ADA3 were important. The above items for each construct explored from the EFA were then fed into for further confirmatory factory (CFA) using AMOS 20.

Figure 2 depicts the CFA model explored by feeding the constructs and their corresponding measures derived from EFA. Here each construct were correlated in the model. As an essential necessity for developing the structured equation model, the internal validity of the constructs were computed by feeding standardized regression and correlation estimates of the constructs as seen from the AMOS outputs. These were subsequently fed into MS Excel Statistical Tool package developed by Gaskin (2016). As revealed in Table 7, the AVE and MSV scores were computed to determine convergent and discriminant validity scores (Lowry & Gaskin, 2014).



Figure 2. Confirmatory Factor Analysis Model Source: The authors.

| | CR | AVE | MSV | MaxR(H) | AT | А | CL | TC | ADA |
|-----|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| AT | 0.835 | 0.627 | 0.304 | 0.836 | 0.792 | | | | |
| А | 0.815 | 0.526 | 0.352 | 0.833 | 0.462 | 0.725 | | | |
| CL | 0.800 | 0.573 | 0.352 | 0.821 | 0.551 | 0.593 | 0.757 | | |
| ТС | 0.785 | 0.551 | 0.300 | 0.798 | 0.487 | 0.390 | 0.548 | 0.742 | |
| ADA | 0.904 | 0.758 | 0.301 | 0.917 | 0.237 | 0.422 | 0.549 | 0.322 | 0.871 |
| | | | | | | | | | |

 Table 7. Computation of Convergent and Discriminant Validity Estimates from Standardized Regression Estimates and Correlation

 Estimates Using the Gaskin Statistical Tool Package

Table 8. Fit Indices Scores for the Model

| Fit Indices | RMR | GFI | CFI | RMSEA | Normed λ^2 (CMIN/df) |
|---------------|-------|-------|-------|-------|------------------------------|
| Default model | 0.045 | 0.913 | 0.954 | 0.061 | 1.827 |

Source: The authors.

Table 7 clearly indicates as the AVE scores of each construct were more than 0.5 they were having adequate convergent validity. Similarly, the MSV scores of the constructs also indicate that they were having desirable discriminant validity to allow further considerations for developing the structured equation model (SEM).

The model fit acceptance was computed by looking at the fit indices scores derived from the AMOS 20 outputs. Table 8 indicates that the model had optimum scores pertaining to the various fit indices. It can be clearly seen that the goodness-of-fit index (GFI) of 0.045 and the root mean square error of approximation (RMSEA) score of 0.061 were acceptable in terms of 'absolute fit measures' suggested by the study of Byrne (2001). Apart from these the comparative fit index (CFI) score of 0.954 indicated an acceptable model fit like what had been earlier suggested by Hair et al. (1998). Normed chi-square score of 1.827 was also found to be acceptable for the computed model.

Testing of Hypothesis

Taking the accepted model for further analysis and development of SEM, the construct ADA was fed as a dependent variable, whereas adaptability (A), ambiguity tolerance (AT), championing leadership (CL) and teamwork and collaboration (TC) were fed in as independent variables to establish the proposed empirical model (Figure 3).

Tables 9.1 and 9.2 indicate that ADA had significant relationship with the construct championing leadership (CL) (Std. β = 0.496, *P* < .05). ADA did not have any significant relationship with the other independent variables, namely, ambiguity tolerance (AT), adaptability



Figure 3. Testing of Hypothesis **Source:** The authors.

| | | Estimate | Std. β | SE | CR | Р |
|------------------|----|----------|--------|-------|--------|-------|
| ADA ← | А | 0.224 | 0.173 | 0.125 | 1.789 | 0.074 |
| ADA \leftarrow | AT | 23 I | 141 | 0.151 | -1.538 | 0.124 |
| ADA \leftarrow | CL | 0.656 | 0.496 | 0.157 | 4.174 | *** |
| ADA \leftarrow | TC | 0.106 | 0.052 | 0.188 | 0.562 | 0.574 |

Table 9.1. Regression Weights (Group Number 1 - Default Model)

Note: *** mean 0.000.

 Table 9.2.
 Co-variances (Group Number I – Default Model)

| | | | Estimate | SE | CR | Р | Label |
|----|-------------------|----|----------|-------|-------|------|--------|
| A | \leftrightarrow | AT | 0.161 | 0.034 | 4.805 | *** | par_12 |
| А | \leftrightarrow | CL | 0.257 | 0.045 | 5.699 | **** | par_13 |
| А | \leftrightarrow | TC | 0.109 | 0.027 | 4.015 | **** | par_14 |
| AT | \leftrightarrow | CL | 0.189 | 0.032 | 5.804 | **** | par_15 |
| AT | \leftrightarrow | TC | 0.108 | 0.022 | 4.858 | **** | par_16 |
| CL | \leftrightarrow | TC | 0.150 | 0.029 | 5.269 | **** | par_17 |

Source: The authors.

Note: *** mean 0.000.

(A) and teamwork and collaboration (TC) (P > .05). This analysis depicts the partial acceptance of the hypothesis of the study. Table 9.2 revealed that all the co-variance estimates were significant (P < .05).

Assuming the above relationship established by the CFA the model was refined accordingly as depicted in Figure 3. The new model now assumed that except CL none of the other independent variables, namely, adaptability (A), teamwork and collaboration (TC) and ambiguity tolerance (AT) had any relation with the dependent variable ADA. As Table 9.2 clearly established significant co-variances between the independent variables adaptability (A), teamwork and collaboration (TC) and ambiguity tolerance (AT), it was assumed that they were

having relationships with each other, which was further tested in the model (Figure 4).

Table 10 depicts SEM regression estimates revealing that the three independent variables, namely, adaptability (A), teamwork and collaboration (TC) and ambiguity tolerance (AT) had significant relationship with championing leadership (CL) which had significant relationship with the dependent variable ADA.

The above model was further refined using data imputation in AMOS 20, as depicted in Figure 5. The model showed that adaptability (A) had significant relationship with teamwork and collaboration (TC) (Std. $\beta = 0.50$,

Table 10. Regression Weights (Group Number 1 - DefaultModel)

| | | | Estimate | Std. β | SE | CR | Р |
|-----|--------------|----|----------|--------------|-------|-------|------|
| тс | \leftarrow | А | 0.249 | 0.408 | 0.059 | 4.225 | **** |
| AT | \leftarrow | А | 0.251 | 0.320 | 0.069 | 3.658 | **** |
| AT | \leftarrow | TC | 0.450 | 0.349 | 0.120 | 3.748 | **** |
| CL | \leftarrow | AT | 0.266 | 0.218 | 0.107 | 2.477 | .013 |
| CL | \leftarrow | А | 0.372 | 0.388 | 0.081 | 4.620 | *** |
| CL | \leftarrow | TC | 0.475 | 0.302 | 0.143 | 3.314 | *** |
| ADA | \leftarrow | CL | 0.749 | 0.560 | 0.106 | 7.070 | **** |

Source: The authors.

Note: *** mean 0.000.



Figure 4. Structured Equation Model (SEM) Source: The authors.



Figure 5. Empirically Tested Model (After Data Imputation in AMOS 20) Source: The authors.

Table 11. Model Fit Indices of the Empirically Tested Model

| Fit Indices | RMR | GFI | CFI | RMSEA | Normed λ^2 (CMIN/df) |
|---------------|-------|-------|-------|-------|------------------------------|
| Default model | 0.010 | 0.990 | 0.995 | 0.062 | 1.851 |

P < .05), ambiguity tolerance (AT) (Std. $\beta = 0.33$, P < .05) and championing leadership (CL) (Std. $\beta = 0.42$, P < .05). TC had significant relationship with AT (Std. $\beta = 0.41$, P < .05) and CL (Std. $\beta = 0.34$, P < .05). On the other hand, AT also had significant relation with CL (Std. $\beta = 0.20$, P < .05). Hence, it is clear that the model had pointed out CL to be the major mediating factor influencing ADA (Std. $\beta = 0.62$, P < .05).

The empirically tested model (Figure 4) can be validated by the estimates revealed in the model fit indices table (Table 11). It is evident that the goodness-of-fit index (GFI) score of 0.990 and the root mean square error of approximation (RMSEA) score of 0.062 were acceptable in terms of being the indicators of 'absolute fit measures'. On the other hand, comparative fit index (CFI) score of 0.995 indicated an acceptable model fit. The normed chisquare score of 1.851 was also in the acceptable range.

Discussions

The empirical model depicted in the present study had brought about the intervening or mediating role of the variable championing leadership, which had played significant role in terms of influencing digital acumen among the respondents. Other leadership variables such as

ambiguity adaptability, tolerance, teamwork and collaboration exerted their influence on developing digital acumen in the respondents by influencing the mediating factor championing leadership. The model in another way thereby justifies a system where the people preferred to exercise 'championing leadership' abilities by bringing in teamwork and collaboration, adaptability to situations and tolerance towards ambiguity as essential or desirable leadership abilities. The model thereby exerts the growing need of leadership-driven initiatives that could drive organizational efforts for facilitating digital prowess (acumen) among people.

Limitations

One of the important constraints that might have influenced the study was that majority of the respondents were contacted informally using their social network connections. On the other hand, the study was restricted to a limited number of organizations and employees located in the NCR of Delhi. As the IT industry is frequently takes into consideration shifting and relocation of the employees a regional perspective might have restricted the scope of the study considering its pan India relevance and future research implications. Lack of pertinent empirical data in the literature might have also restricted validation and further comparison of the findings of the study.

Practical Implications

The study can provide important HR policy related as well as pertinent technical implications for an information technology organization where most of the jobs or projects are innovation driven or influenced by the extent to which the organization harnessed digitalization as a strategic need to bring about process improvements, innovation and organization-wide changes to remain competitive in the fast-changing business landscape. From the HR perspective, the indications pertaining to the explored leadership variables could help people managers develop a sustainable HRD system that would cater the development of the desired leadership abilities among IT employees; it would not only make them more digitally competent and agile but would also contribute to enhance the overall competitiveness of the organization by remaining more proactive in their journey towards digital excellence. The model proposed in the study would help HR policymakers and innovation think tanks to bring about HR-driven technological excellence in the organization.

Conclusion

The study has brought about important perspectives pertaining to the growing role of leadership abilities in terms of developing digital acumen among people in information technology organizations. With the plethora of changes happening with a large-scale digitalization of today's business, the focus of today's HR would shift from process-driven HR perspectives to more capability-driven engagements, which would harness innovation and technological excellence at the workplace. Leadership abilities of senior managers and innovative leadership-driven initiatives would bring about success for achieving the digitalization goals of the organization. The model proposed in the study depicting the mediation of the variable 'championing leadership' facilitating the development of digital acumen among people would be considered to be important in shaping the future landscape of information technology organizations.

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