The Role of Leadership Theories in Information Technology Acceptance "Case Study at Al-Hikma Pharmaceutical Company"

Dr. Ibrahim Issa Abu-Nahleh[1]

Abstract

The leadership literature is voluminous and much of it is confusing and contradictory. In order to make our way through this 'forest', I will consider a number of theories to explaining what makes an effective leader in order to connect leadership and the acceptance of information technology. The key to achieving sustainable change success is to have excellence in leadership at all organization levels. So as a change leader you can make a great difference to the success of your team by your leadership. I suggest that a change leader could make a real difference to the effectiveness of his team by adopting john Adair model which is very useful model in project management context and any change happened in organization we could consider it as a project. This research aims at exploring how both individual and organizational factors that influence Information Technology acceptance by top managers, employees Staff at al-Hikma headquarter.

1. Introduction

Leadership has been a major topic of research in psychology for almost a century and has spawned thousands of empirical and conceptual studies. Today's organizations operate in the context of an information age in which technology has revolutionized the operating environment of organizational leaders. This technology, with its corresponding impact on organizational information flow, presents leaders with challenges and opportunities that can fundamentally restructure how they accomplish the tasks of organizational leadership and change. And we should understand that leadership is about coping with change, a Successful change Leaders should:

- Challenge the process
- inspire a shared vision
- enable others to act
- Model the way
- encourage the heart

Information technology acceptance has been studies ever since the existence of the term. It is a fast growing research field and many models has been developed to study the user acceptance and adoption of the new technology. TAM is one of the leading technology acceptance models. A user attitude towards the acceptance of new information technology plays an important role on information technology adoption and use. [9] TAM has been extended over time to include other determinant factors that contributes to the adoption of new technology.

This research aims at exploring the factors that influence Information Technology acceptance by employees at al-Hikam pharmaceutical company.

---

[1] Assistant Professor, Computer Science Department, Computer Science Faculty, ALBaha University, Kingdom of Saudi Arabia. P.O.Box (1988)

The researcher shall explore to what level employees are using and adopting information technology products in and out of their works. A modified version of the Technology Acceptance Model was introduces and shaped to achieve this objective and a new research model was depicted. The research findings shall contribute to the information technology field in general and to the technology acceptance in specific.

2. Literature Review

A. Concept of Leadership:

Is inspiring people with a compelling vision which encourages them to come together in a common cause and keeps them together to accomplish common goals. People may not be aware of this common cause; the leader draws attention and convinces and clarifies the common goals. Robbins (1998).

B. Leadership Theories:

According to Barrick and Alexander (1991) there are eight basic types of leadership theories:

1- Trait theories of leadership since its introduction over twenty years ago, charismatic leadership has been strongly emphasized in the US management literature (Bass 1990), These theories answer the question by specifying or identifying traits, characteristics, abilities, behavioural patterns, or skills that leaders have or demonstrate. If a definition is offered by a trait theorist, it normally begins "a leader..." and follows with a list of traits (is a servant, is charismatic, is ethical, takes initiative, shows excellence, is goal-oriented, is inspiring, is good at communicating, has positive self-regard, is empowering, etc.). The problem with these theories has always been identifying characteristics that differentiate leaders from people with the same traits who are not leaders.

2- Management theories of leadership address the specific question "How do leaders get people to do what they want them to do?" These theories are concerned primarily with organizational or group performance. This type of theory (transactional leadership, transformational leadership, democratic leadership, LMX, the Four Is, path-goal, etc.) tends to dominate leadership thought, and discussions of "different" theories are usually limited to this type. The essential problem for these theories is the problem of exploitation. Marx substantiated that capitalism can only work if workers are paid less than they are worth. If they are paid according to their worth, there is no profit for owners. Management theorists undertake two important missions: (1) to justify the superiority of the leader, and (2) to get people to accept their role in the economy--by inspiration, coercion, exchange of valued things, conformance, etc.--and thereby accept their subsequent exploitation.(McCauley, Moxley, and Van Velsor 1998)

3- Relationship theories answer the question by defining leadership as a relationship among people with mutual wants and needs who are striving for mutual goals (no one goes to work to make someone else rich). This relationship is defined by conflict (Burns) and by influence (Rost).

4- Process theories answer the question by defining leadership as a process of dynamic interaction among people with varying ethics who align themselves to solve specific social problems or to generate general evolutionary social change. This process is understood as dissipative and not controllable by the leader. In these theories, the leader is more of a symbol of what everyone wants rather than a producer of outcomes. The fundamental problem for leadership studies is distinguishing leadership from management, supervision, statesmanship, and command. All of these words represent concepts that are different, but often labeled "leadership".

5- Behavioural theories addresses many of the holes in the traits theory by concentrating on what leaders actually do rather than on the qualities they possess.

Most behavioural theories (Theory X & Theory Y managers, Managerial grid) attempt to answer the question, "What are the different styles of leadership, and how effective are these styles? (Hall, 1991).

6- Participative leadership theories recommend leadership styles that involve other people in the leadership process. These theories (Lewin's, Likert's leadership styles) do suggest, however, that a leader retains the right to give or deny any subordinate a say in the leadership process.

7- Situational leadership theories suggest that leadership is specific to the situation in which it is being exercised. These theories (normative model, action-centered leadership model, leadership continuum, Hersey and Blanchard's situational leadership model, path-goal theory, etc.) suggest that there may be different styles of leadership required at different levels in the same organization.

8- Contingency theories (LPC, cognitive resource, strategic contingencies theory) refine the situational viewpoint by focusing on identifying the situational variables that determine the most appropriate style of leadership to fit the particular circumstances.

D. John Adair's theory's much more practical and useful model is the one associated with john Adair, one of the UK's most influential leadership gurus and the first person to occupy a university chair in leadership in the UK. He held that the effectiveness of a leader is determined by their ability to meet three areas of need: the needs of the team, of the task ,and of the individual. Adair (1989) represented these by three over-lapping circles.
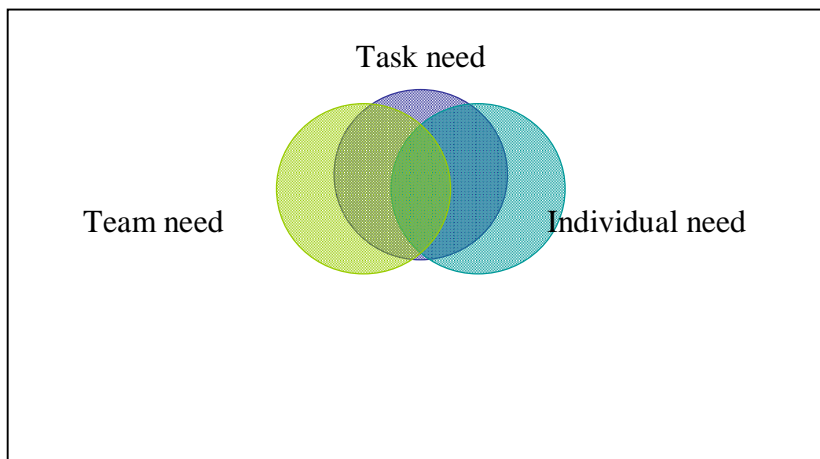

Figure (1) Adair's overlapping circles

3. *Problem Definition*

The study was conducted to address certain key issues abut information technology acceptance in al-Hikma pharmaceutical company. It would be worth examining the normal influence of factors (Organizational investment, Perceived job alternative, Expectations of success, Low trust, unclear performance, and Evaluation system)

On the information technology acceptance. Other questions include the following:
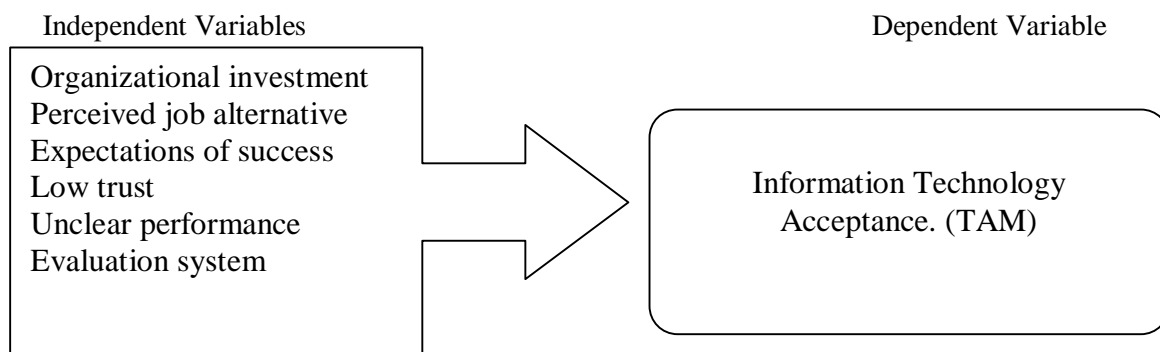
1. To what extent is the influence level of leadership on information technology acceptance in al-Hikma pharmaceutical company?
2. Is there any influence for factors (Organizational investment, Perceived job alternative, Expectations of success, Low trust, unclear performance, and Evaluation system) on the information technology acceptance?

4. Suggested model

Based on leadership theories and especially John Adair's theory I proposed the following model which illustrates how both individual and organizational factors can increase technology acceptance model and provide favourable outcomes (increase efficiency and effectiveness for organization)

- **Individual factors** at the individual level, Farrell and Petersen (1982) have identified certain personality traits, needs and other factors that are likely to be related to leader behavior.in terms of traits, they found that employees who are high self-monitors, posses an internal locus of control, and have a high need for power are more likely to engage in change leader behaviour.

- **Organization factors** also Farrell and Petersen (1982) identified certain Organization factors like reallocation of resources, promotion opportunities, low trust, role ambiguity, unclear performance evaluation systems and democratic decision making that will create breeding grounds for leadership behaviour.

Based on the theoretical background and the literature review the researcher has developed a conceptual model to integrate the primary components of organizational and individual factors to Information Technology acceptance (TAM). Figure (2) depicts the research model.

Independent Variables   Dependent Variable

| Organizational investment
Perceived job alternative
Expectations of success
Low trust
Unclear performance
Evaluation system | → | Information Technology
Acceptance. (TAM) |

Research Model

Figure (2)

5. Hypotheses of the Study

Based on the literature reviewed, the researcher proposed six main hypotheses as follows:

H1: There is significant relationship between Organizational investment and information technology acceptance.

H2: There is significant relationship between Perceived job alternative and information technology acceptance.

H3: There is significant relationship between Expectations of success and information technology acceptance.

H4: There is significant relationship between Low trust and information technology acceptance.

H5: There is significant relationship between unclear performance and information technology acceptance.

H6: There is significant relationship between Evaluation system and information technology acceptance.

6. *Methodology*

Research instrument

The questionnaire was designed and developed using the results of the literature review. The draft questionnaire was tested by scholars and experts, which led to minor modifications in the wording of some survey items. The final questionnaire comprises two parts. The first part is demographics of the sample such as gender, age, educational level, experience years, information technology usage and frequency of use. The second part contains a series of questions about the organizational and individual factors affecting the acceptance of IT. Research constructs were operationalized by means of related studies and a pilot test. A five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used to measure the research variables.

Study Population and Analysis Unit

To be able to examine the research problem and the questions raised in that respect and in order to fulfill the objectives of this study, the researcher have been chosen to conduct the research at theFounded in Amman, Jordan in 1978, Hikma has steadily evolved as a leading multinational pharmaceutical company, with a steadfast reputation for quality. The Company's initial focus was on developing a branded pharmaceuticals business across the MENA region. However, in the early 1990s, Hikma acquired a generic pharmaceuticals business in the United States and established an injectable pharmaceutical operation in Portugal, thereby expanding the Company's outreach beyond the MENA region. The Company has since continued to expand significantly, through organic growth and acquisition. The survey questionnaire was sent to (50) participants at Hikma headquarter; (40) questionnaire were returned from the targeted   population, (7) questionnaire were excluded from the analysis leaving (33) questionnaires that were included in the analysis.

Unit of Analysis

The unit of analysis is the top managers, and employees Staff at al-Hikma headquarter.

Instrument validity

The content validity of the questionnaire was determined by a panel of experts in the fields of leadership, management, and Information Systems.

Instrument reliability

The reliability of the survey instrument was assessed through Cronbach's coefficient alpha (a). All coefficients alpha were within acceptable ranges for comparable in strumentations (Sekran, 2000)

7. *Population description*

This section describes the population through the general characteristics of the respondents in term of gender, age, educational level, working experience, working position, as shown in table (1) below, The data in table (1) show that the majority of Respondents over half (81.1) were males and (18.2) were Female.

The data in table show that respondents who are between 25-30 years old represent the highest percentage among respondents with (30.3%), While less than 25 years old their percentage (6.1%), from 31-35years old were (12.1%), only (15.2%) was age over 45 years, The data in table (7) show also that the highest percentage (63.6%) was for the University degree holders. only (3%) attained post graduate qualification.

The respondents have middle and long experience in their companies,(21.2%) are among (1-5 years)(24.2%) are from (6-10) years and(12.1%) are more than 10 years working experience, where (42.4%) are more than 16 years.

Table 1: Demographic Characteristics of respondents (n=33)

Characteristics	Frequency	Percentage
Gender:		
Male	27	81.8
Female	6	18.2
Age:		
Less than 25 years	2	6.1
25 – 30	10	30.3
31 – 35	4	12.1
36 – 40	5	15.2
41 – 45	7	21.2
46 years and more	5	15.2
Educational Level:		
Bachelors	21	63.6
Master	11	33.3
PhD	1	3.0
Experience Years:		
1 – 5	7	21.2
6 – 10	8	24.2
11 – 15	4	12.1
16 years and more	14	42.4

8. Results and Hypothesis testing.

(H1) There is significant relationship between Organizational investment and information technology acceptance. .

Pearson correlation was used to test above Hypothesis and it was found that there are significant relationship at (0.05) level between independent variable (Organizational investment) and Dependent variable (information technology acceptance), we can find appositive and significant effect at function level ($\propto \le 0.01$) which supports hypothesis (H1), where (r=0.638**) which is moderate.

(H2): There is significant relationship between Perceived job alternative and information technology acceptance.

Pearson correlation was used to test above Hypothesis and it was found that there are significant relationship at (0.05) level between independent variable (perceived job alternative) and Dependent variable (information technology acceptance), we can find appositive and significant effect at function level ($\propto \le 0.01$) which supports hypothesis (H2), where (r=0.660**) which is moderate.

(H3) There is significant relationship between Expectations of success and information technology acceptance.
Pearson correlation was used to test above Hypothesis and it was found that there are significant relationship at (0.05) level between independent variable (expectations of success) and Dependent variable (information technology acceptance), we can find appositive and significant effect at function level ($\propto \le 0.01$) which supports hypothesis (H3), where (r=0.479**) which is moderate.

(H4) There is significant relationship between Low trust and information technology acceptance.

Pearson correlation was used to test above Hypothesis and it was found that there are no significant relationship at (0.05) level between independent variable (low trust) and Dependent variable (information technology acceptance), we can find negative and no significant effect, where (r=0.316) which is moderate.

(H5) There is significant relationship between unclear performance and information technology acceptance.

Pearson correlation was used to test above Hypothesis and it was found that there are no significant relationship at (0.05) level between independent variable (unclear performance) and Dependent variable (information technology acceptance), we can find negative and no significant effect, where (r=0.274) which is moderate.

(H6) There is significant relationship between Evaluation system and information technology acceptance.

Pearson correlation was used to test above Hypothesis and it was found that there are no significant relationship at (0.05) level between independent variable (evaluation system) and Dependent variable (information technology acceptance), we can find negative and no significant effect, where (r=0.330) which is moderate.

Table 2: Means, Standard Deviations and Pearson Correlation among the research variables

variables	M	S.D	1	2	3	4	5	6
Association rules	3.96	0.420	-					
Clustering	3.79	0.506	0.550**	-				
Trend Detection	3.62	0.635	0.666**	0.495**	-			
Sequential Pattern	3.81	0.493	0.278	0.556**	0.489**	-		
Importance of SHRP	4.11	0.552	0.638**	0.660**	0.479**	0.316	-	
Use of SHRP	3.99	0.524	0.274	0.330	0.395*	0.486**	0.324	-

** Correlation is significant at the 0.01 level.
* Correlation is significant at the 0.05 level.

9. Conclusion

Organizations will succeed or fail in information technology acceptance based on their leadership. Because information technology change permeates the organization, is so critical to competitive advantage and survival, change leadership is an even more compelling component of most organizations. Issues related to leadership itself that should be covered in a change leadership course according to different types of leadership theories include the personal qualities required by leaders, the skills needed, and how leaders are developed. (kouzes and poser 1987), So technology Change leadership is an approach taken to initiate, plan, execute, control, and terminate a change with the intent of achieving the objectives used to justify the change's approval. You as a change leader can design & manage change program, based on John Adair's theory a proper change leader can: Find facts, analyze data, investigate needs, and brainstorm solutions, Produce reports, prepare training & communication materials and also Leader Communicate to users in consistent way by using: Hot Vehicles for sensitive & significant information – face to face, seminars, presentations, road show , and cold Vehicles for uncontroversial or detailed messages – video, notices, posters, emails.

References

Barrick, M. R., Day, D. V., Lord, R. G., & Alexander, R. A. (1991). Assessing The utility of executive leadership. Leadership Quarterly, 2, 9–22.

Bass, B. M. (1990). Bass and Stogdill's handbook of leadership: Theory, research, And managerial applications (3rd ed.). New York: Free Press.

McCauley, C. D., Moxley, R. S., & Van Velsor, E. (Eds.). (1998). Handbook of leadership development. San Francisco: Jossey-Bass.

Robbins, Stephen (1998), organizational behaviour (eighth edition).new jersey: prentice hall, the utility of executive leadership. Leadership Quarterly, 2, 9–22.

Storey, J. (1994). *Cultural Theory and Popular Culture*. New York: Harvester Wheatsheaf..

Hein, M. B. (1991). Taxonomic efforts in the description Of leader behavior: A synthesis and functional interpretation. Leadership Quarterly, 2, 245–287.

Hall, R. H. (1991). Organizations: Structures, processes, and outcomes (5th ed.). Upper Saddle River, NJ: Prentice Hall. Adair, J(1989),great leaders, Talbot Adair press

Project Management for Information Sysems,4th Edition, James Cadle and Donald Yeates, 2004 ,Prenice Hall Great Britain kouzes,J and poser,b(1987), the leadership challenge, Jossey-Bass

D.Farrell and J.C.Petersen , 'patterns of political behavior in organization ' 'academy of management review', July 1982,p.405.

Klenke,k (1993)changing roles of information systems professionals: from technical managers to strategic leaders, , ACM Press.

Fred Davis (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", MIS Quartely, 13/1989, pp. 319.339.

Icek Ajzen, Martin Fishbein (1980), "Understanding attitudes and predicting social behavior", EngleCliffs-Wood: NJ: Prentice Hall.

Samer Barakat, Asim El Sheikh (2010), "TRUST AND USER ACCEPTANCE OF MOBILE ADVERTISING", European, Mediterranean & Middle Eastern Conference on Information Systems, (EMCIS2010) April 12-13 2010, Abu Dhabi, UAE

Fred Davis, Viswanath Venkatesh (2004), "Toward preprototype user acceptance   testing   of   new information   systems: implications   for   software   project management", IEEE Transactions on Engineering Management, Vol. 51, No 1.

Zarehan Selamat, Nahariah Jaffar, "Information Technology Acceptance: From Perspective of Malaysian Bankers", International Journal of Business and Management, Vol. 6, No. 1; January 2011, www.ccsenet.org/ijbm

Gable, G.G. (1991). Consultant Engagement for Computer System Selection: A Pro-Active Client Role in Small Businesses. Information and Management, Vol 20, 83-93

Igbaria, M, Guimaraes, T., & Davis, G.B. (1995). Testing the Determinants of Microcomputer Usage via a Structural Equation Model. Journal of Management Information Systems, Vol.11, No. 4, 87-114

Venkatesh, Viswanath & Fred D. Davis. (2000). A Theoretical Extension of Technology Acceptance Model: Four Longitudinal Studies. Management Science, 46 (2), 186-204

Rogers, E.M., and Shoemaker, F.F. (1997). Communication of Innovation: A Cross Culture Approach, New York, Free Press

Chau, P. Y. K., & Hu, P. J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. Decision Sciences, 32(4), 699–719

Web Site References

1-   http://www.leadership-studies.com/documents/mgmt_standards.pdf
2-   www.robocup.org
3-   www.brint .com
4-   www.teama.com
5-   www.johnadair.co.uk
6-   www.hikma.com