




“Talent management strategies of a public UAE hospital in the Industry 4.0 era: A qualitative analysis”

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TALENT MANAGEMENT STRATEGIES OF A PUBLIC UAE HOSPITAL IN THE INDUSTRY 4.0 ERA: A QUALITATIVE ANALYSIS

Abstract

Talents play a critical role in achieving organizational strategic goals and a higher level of performance in the healthcare industry. Therefore, the UAE government, which strives to provide world-class healthcare services, encouraged the adoption of talent management strategies and creation of essential capabilities for talent recruitment, development, and retaining. This study explores the talent management strategies, policies, and practices in multiple departments of a public UAE hospital. Moreover, it investigates required skills, competencies, and programs for those departments in the context of Industry 4.0. The study adopted a case study approach and qualitatively surveyed a purposive sample of 13 departmental managers, section heads, and supervisors who are experienced in employee management. The study found that talent management at the studied hospital is undefined and unclear in terms of strategies, policies, and practices. Furthermore, the study highlighted the need for employee encouragement, motivation, and engagement, as well as confirmed the critical role of management and leadership in facilitating talent management in the hospital. Accordingly, a UAE hospital could benefit from this study to develop its talent management policy and strategies that will guide managers in the Industry 4.0 era.

Keywords

human resources, development, organization, performance, healthcare

JEL Classification

J24, M51, M53

INTRODUCTION

Talent crisis of skilled labor is globally unaddressed. Accordingly, the shortage could reach millions of workers and result in a huge loss of annual revenue. In the UAE context, talent management became a critical issue for business organizations. Blandford (2009) claimed that the UAE organizations learned a lesson from the global crisis of low cash liquidity, which happened in 2009-2015, and felt the need to establish long-term plans that focus on talent management, utilization, and development.

In recent years, the UAE's image as a workplace has changed and professionals are attracted to enter the country, the UAE government's efforts to build a knowledge-based economy by providing national human resources with the skills required for the labor market, increasing the number of research and development (R&D) personnel, promoting entrepreneurship, and attracting talents (The United Arab Emirates' Government portal, 2019). However, the literature identified many gaps related to talent management, including the lack of training, learning, and development within the HR and talent management areas (Al Suwaidi, 2014). Moreover, insufficient management support for a talent management strategy, inadequate and unproductive training programs, and ineffective staff appraisal systems (Al Mansoori,

2015), a shortage in the national talent (Abir, 2015), underutilization of women (Waxin & Bateman, 2016), and inadequate manager's contribution to the talent management process (Al Awadhi, 2018) has been observed. Besides, Dirani (2018) identified a critical challenge of talent management and development activities within UAE organizations, which is the influence of the two-tier system that includes one for Emirati nationals and another for expatriates. Additionally, the HR functions of UAE organizations, including performance and talent management as found by KMPG (2019), are undergoing disruption due to Industry 4.0 technologies, such as artificial intelligence and applied data analysis.

Hence, this paper aims to explore the talent management strategies and practices of multiple departments of a public UAE hospital and investigates the skills, competencies, and programs required for talent management in the Industry 4.0 era. The study uses a structured qualitative questionnaire on a purposeful sample of departmental managers, section heads, and supervisors. Moreover, the study comes up with recommendations for improving talent management strategies and practices that suit a UAE hospital in the Industry 4.0 context.

1. LITERATURE REVIEW

1.1. Talent and talent management definitions

The linguistic definition of a "Talent" by The Free Dictionary (n.d) is "a special, often creative natural ability or aptitude" and "a person with special ability in a particular field". In business sphere, van Dijk (2008) described "Talent" as the product of ability (competence, education, training, and experience), coupled with motivation (engagement, satisfaction, challenge, and wellness) and opportunity. Andersen (2013) another definition for a "Talent"- "a person who possesses special skills, which are difficult to copy or imitate, who is a top performer with competencies of strategic importance which cannot be readily developed". Also, The Chartered Institute of Personnel and Development – CIPD (2020) defined talent as "those individuals who can make a positive impact on organizational performance either through their immediate contribution or in the longer term by demonstrating the highest levels of potential".

In literature, the definitions of talent management vary. Collings and Mellahi (2009, pp. 26-27) defined strategic talent management as "activities and processes that involve the systematic identification of key positions which differentially contribute to the organizational sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate

filling these positions with competent incumbents and to ensure their continued commitment to the organization".

Serrat (2010, p. 3) defined talent management as "the additional processes and opportunities that an organization makes available strategically to a pool of people who have talent". The definition carries a few keywords that are additional, pool, and strategic. The Chartered Institute of Personnel and Development CIPD (2020) proposed another definition that is "the systematic attraction, identification, development, engagement, retention, and deployment of those individuals who are of particular value to an organization, either because of their high potential for the future or because they are fulfilling business/operation-critical roles". Furthermore, The Chartered Institute of Personnel and Development CIPD (n.d.) emphasized that it is about using data obtained from the workforce, succession, and contingency planning tools to identify existing talents and to decide what talents are needed to add value to the organization.

1.2. Theories, strategies, and models of talent management

The resource-based view (RBV) of the firm proposed by Barney (1991) suggests that the firm competitive advantage depends on the valuable, rare, and hard to copy resources that include human resources. Accordingly, human resources development (HRD) is a branch of human resources management based on the strategic view of a HRD theory. One new definition of the HRD as outlined

by Wang et al. (2017, p. 1175) is “a mechanism in shaping individual and group values, beliefs and skilling through learning-related activities to support the desired performance of the host system”. Furthermore, several theories and models were developed to improve talent performance (Rabbi et al., 2015). Another important theory that emerged from the theory of the firm is the talent-based theory. This theory proposes that talent is the only resource that may help in gaining and maintain a competitive advantage (Rabbi et al., 2015).

The importance of talent management strategies is critical for organizations. Kamil et al. (2011) concluded that organizations, which consider talent management as a strategic human resource, in the end get higher success and sustainability. Sareen and Mishra (2016) revealed that talent management is positively related to the overall organizational performance. Moreover, Sareen and Mishra (2016) found that recruiting and attracting, compensation and rewarding, succession planning have higher impact on the organizational performance, comparing to other dimensions such as training and development and defining and retaining talents.

Regarding talent management strategies, Ford et al. (2010) recommended developing organizational talent management strategies and programs that fit with organizational culture, market, and resources. McKinsey & Company & the Conference Board (2012) suggested that organizational priorities were leadership development, talent acquisition and retention, as well as strategic workforce planning because there is no single perspective and approach to talent management. According to Andersen (2013), organizations must have a clear and practical definition of the “Talent”, which could be linked to the human resources strategy, talent management policies, and practices, in addition to the company system and context. These all enhance the competitive advantage of a company.

Chambers et al. (1998) highlighted the essential factors for motivating talents, including 1) the company brand, values, culture, performance, industry leader, presence of talented people, well-planned development strategies, inspiring mission, fun with colleagues, and job security, 2)

compensation and lifestyle, and 3) great jobs, including freedom and autonomy, career advancement, career growth, and admired boss. McKinsey & Company (2012) developed the “Five Elements of a Successful Talent Formula”, which helps organizations staying competitive in the market. The five elements are: to install a talent mindset at all levels of the organization starting with senior management; to create a winning Employee Value Proposition (EVP) that brings scarce talent through the doors, and keeps them there; to recruit great talent continuously; to grow great leaders; to distinguish and affirm the top performers.

Hills (2012) said that the ideal talent strategy should be created collaboratively with all stakeholders, up to date, integrated with business plans, and backed up with HR metrics that link talent with business results. The talent strategy should be tailored to the particular culture, maturity of the business, stay simple, and well communicated. Additionally, Hills (2012) recommended HR departments to be skilled in talent management and in assisting managers get the best from them. More, the PwC (2012) and Keller and Meaney (2017) advised using people analytics as a key tool to provide evidence and insight to support HR decision-making.

Regarding talent competence, in 2013, the Association for Talent Development (ATD) (2014a) proposed its first talent competency model. The competency model (ATD, 2014a) included 10 areas of expertise: instructional design, training delivery, learning technologies, evaluating learning impact, managing learning programs, integrated talent management, coaching, knowledge management, change, and performance improvement. The model also included six foundational competencies: business skills, global mindset, industry knowledge, personal skills, interpersonal skills, and technology literacy. Additionally, the model (ATD, 2014b) redefined the knowledge and skills required for TD professionals to be successful and capture changes driven by digital, mobile, social technologies, demographic shifts, globalization, and economic forces.

Then, the ATD (2019) refined the model to help talent development professionals stay current on knowledge and skills that are important for suc-

cess in the field. The update is based on data collected from a literature review, interviews with thought leaders, and an occupational survey of more than 3,000 talent development professionals from 73 countries.

1.3. Talent management in the Industry 4.0 era

Industry 4.0 was defined by the Germany Trade and Invest (GTAI) (2011, p. 6) as “the technological evolution from embedded systems to cyber-physical systems that enable technologies, such as the Internet of Things (IoT), and online data and services to create a truly networked world in which intelligent objects communicate and interact with each other”. Bayraktar and Ataç (2018), argue that Industry 4.0 will affect the business by extinguishing some professions, creating new jobs, changing the required skills, and establishing new managerial understanding and regulations.

On the other hand, the World Economic Forum (2019) highlighted critical skills for the Industry 4.0 workforce, including 1) developing new leadership capabilities, i.e. the ability to embrace ambiguity and explain the associated risks and uncertainties to the workforce, combine operational management, technology, integration, and people management skills, and use analytic, 2) managing the integration of technology in the workforce, 3) enhancing the employee experience, 4) building an agile and personalized learning culture, 5) establishing metrics for valuing human capital, and 6) embedding diversity and inclusion.

On the other hand, Shaw and Varghese (2018) concluded that emerging technologies such as the Internet-of-Things, big data, and artificial intelligence will automate most of the HR processes and the HR departments will play a more strategic role in the organization competitiveness. Hence, the managers need to adopt appropriate management and innovation skills to survive and grow within Industry 4.0.

Whysall et al. (2019) suggested transforming the talent management theory and practice towards a more dynamic, systems-thinking orientation, acknowledging the interrelated nature of different talent management activities.

2. AIM OF THE STUDY

The study has multiple aims. It explores the talent management strategies, policies, and practices in multiple departments of a public UAE hospital in the Industry 4.0 era. The objectives of the study are as follows:

- 1) Get to know how managers understand the definition of a talent, talent management, and their practices of the selection, development, and retaining of talents at their departments.
- 2) The talent management strategies, facilitators, and inhibitors at a UAE hospital.
- 3) The manager’s perception of the effect of Industry 4.0 technologies on talent management.
- 4) The skills, competencies, and programs required to develop the hospital’s talents within the Industry 4.0 contexts.

The study will come up with recommendations for improving talent management at the UAE hospital to adopt the best talent management strategies to grow in the UAE’s highly competitive healthcare market, particularly within the Industry 4.0 era. Besides, other UAE hospitals could benefit from the study to expand the role of the healthcare sector in enhancing the country’s innovation and competitiveness.

3. METHODOLOGY

The study used the case study approach to explore qualitatively the talent management strategies, processes, policies, activities, and programs as practiced and described by a purposive sample of department managers, section head, and supervisors in a UAE tertiary hospital within the Industry 4.0 contexts.

The sample included participants with a minimum of 1-year of working experience in their current position and having responsibilities in employee recruitment, development, appraisal, and promotion. The data was collected until reaching a point of data saturation and no new result and theme were generated.

The case study approach helps to conclude a specific phenomenon, organization, event, situation, individual, or group. Besides, the interpretation of the findings is shaped by the researcher's own experiences and background.

The study used a structured qualitative survey to collect the required data. The survey contains four parts: 1) six questions to collect the necessary demographic data about respondents; 2) one open-ended questions related to the participant's view of a talent and talent management; 3) three open-ended questions related to hospital talent management strategies and practices; and 4) three open-ended questions related to hospital talent management strategies and practices within the Industry 4.0 era.

The study survey was prepared based on the literature review, particularly the previous works and dissertations of Al Suwaidi (2014), Al Mansoori (2015), Abir (2015), and Al Awadhi (2018). The study questions are: 1) how participants define a talent and talent management; 2) ways to select, develop, and retain talents; 3) talent management strategies and initiatives implemented; 4) facilitators and inhibitors of talent management; 5) the perceived effect of Industry 4.0 on talent management; 6) crucial skills and competencies required to develop the hospital's talents within Industry 4.0; and 7) how the hospital prepare talents for the Industry 4.0 (Appendix 1).

The survey was sent to the selected participants by email, including an information sheet about the research and instructions. Then, a reminder email was sent after two weeks to all participants. Finally, the participants sent back a total of 13 responses after four weeks.

4. RESULTS

The participants sent back 13 responses from multiple departments, including the medical department (3, 23%), nursing (1, 8%), pharmacy (1, 8%), laboratory (4, 31%), allied health (2, 15%), and biomedical engineering (2, 15%). Some departments, including the IT and the supply chain, did not respond at all. The sample also includes females (7, 54%), males (6, 46%), age of 31-45 years (4, 31%),

age of 46-60 years (7, 54%), and above 60 years (2, 15%). Concerning their education, the sample includes bachelor holders (4, 31%), master holders (5, 39%), PhDs (1, 8%), MBBS and others (3, 23%). All respondents are department heads (1, 8%), section heads (8, 62%), supervisors (1, 8%), unit manager (1, 8%), and others (2, 15%) with experience of 1-2 years (2, 15%), 3-5 years (4, 31%), and more than 5 years (7, 54%) in their current positions. For details, see Table 1.

Table 1. Sample characteristics

Characteristics	Frequency	Percentage (%)
Gender		
Male	6	46%
Female	7	54%
Age		
25-30 yeas	0	0
31-45 years	4	31%
46-60 years	7	54%
Above 60 years	2	15%
Departments		
Medical	3	23%
Nursing	1	8%
Pharmacy	1	8%
Laboratory	4	31%
Allied health	2	15%
Biomedical	2	15%
Others	0	0
Position		
Department Head	1	8%
Section Head	8	62%
Supervisor	1	8%
Unit Manager	1	8%
Others	2	15%
Experience		
1-2 years	2	15%
3-5 years	4	31%
More than 5 years	7	54%
Education		
Diploma – High school diploma?	0	0
Bachelor	4	31%
Master	5	39%
PhD	1	8%
MBBS and Others	3	23%
Total	13	100%

Regarding the responsibilities associated with human resources management, the majority of respondents are responsible for employee recruitment (8, 62%), employee development (9, 69%), and employee appraisal (11, 77%). In addition,, nearly half of the respondents is responsible for promotion (Table 2).

Table 2. Respondents' roles in human resource management

Roles in HR management	Frequency	Percentage (%)
Employee recruitment	8	62%
Employee development	9	69%
Employee appraisal	11	77%
Employee promotion	6	46%

The thematic analysis of the survey's contents shows that the respondents define a talented person, in addition to having unique skills and competencies, as having special personal qualities (13 out of 38, 34.2%), leadership qualities (9 out of 38, 23.7%), cognitive qualities (5 out of 38, 13.2%). Other responses concluded that talents could be created (1, 2.6%) and some persons could have multi-talents (1, 2.6%). For further details, refer to Appendix A.

Regarding the respondent's view of talent management, 8 out of 24 (33.3%) responses involved development, improvement, direction, and training of talented employees. Another few responses included other elements of talent management, particularly identifying talents and capture the good initiatives (3, 12.5%), recruiting, attracting and hiring talented employees (4, 16.7%), and others. For further details, refer to Appendix A.

The respondents also offered broad criteria for selection, development, and retaining talents in their departments. For talent selection, they pointed out 27 elements included skills (3, 11.1%), knowledge (2, 7.4%), experience (2, 7.4%), qualification (3, 11.1%), motivation (3, 11.1%), character (2, 7.4%), performance (4, 14.8%), and others. For talent development, they pointed out 27 strategies, which are doing regular performance appraisal (4, 17.4%), training and support (10, 43.5%), and others. Further, they mentioned 20 strategies for talent retention, including incentives and promotions (9, 45%), appreciation, recognition, and awarding them (3, 15%), and others. For further details, refer to Appendix A.

About talent management, 6 out of 13 (46%) respondents reported that there is no talent management policy in their hospital. The rest of the respondents, mainly 7 (54%), were not aware or sure about the existence of such a policy. Concerning the presence of a talent pool at the hospital, 6 out

of 13 (46%) respondents claimed that they have this pool in the hospital, while the rest 7 (54%) either said no or they were not aware of that. In addition, 6 out of 13 (46%) respondents said that they have people analytics at the hospital, while the rest 7 (54%) either said no or they were not aware of that.

Regarding facilitators and inhibitors of talent management at the UAE hospital, the respondents mentioned 19 comments related to the facilitators of talent management that could be listed only under the "organizational factors" e.g. management and leadership (7, 36.8%), IT support (4, 21.1%), HR departments (3, 15.8), and training (3, 15.8), etc. Concerning the inhibitors of talent management, the respondents mentioned 32 comments that could be classified under 2 main themes that are organizational inhibitors (22, 68.8%) and individual factors (10, 31.3%). For further information, please refer to Appendix 1.

Regarding the effect of Industry 4.0 on talent management, the respondents mentioned 27 comments, which could be classified into 2 main groups, including answers relevant to the industry 4.0 (19, 70.4%) and answers irrelevant to the industry 4.0 era (8, 29.6%). Furthermore, the respondents mentioned 37 skills and competencies required for talent management within the Industry 4.0 era that could be listed under 4 main themes, including specific skills and competencies (11, 29.7%) related to industry 4.0, cognitive skills (9, 24.3%), managerial skills (9, 24.3%), and 4) other skills and competencies (8, 21.6%). For further details, please refer to Appendix 1.

Finally, all programs and activities, which implemented in the UAE hospital for talent development, were found irrelevant to the Industry 4.0 challenges. For further details, refer to Appendix A.

5. DISCUSSION

The thematic analysis of what the respondents added to the definition of talent pointed out that most of the respondents believe that talents should have extra positive personal, leadership, or cognitive qualities to be able to make a positive effect on the organizational perfor-

mance. This result matches, to some extent, the recommendation of The Association for Talent Development ATD (2014a). The study also found no agreement among respondents about a specific and dominant quality that can be added to the definition of a talent.

One respondent said “I believe that searching for talented people within the organization is an important issue. However, having a higher degree doesn’t make someone talented. So, allowing who deserve will make a great and positive impact on all”. Although this quote is smart and presents a well understanding of the concept of talent management, it still reflects a subjective view of one respondent, and it cannot be generalized to the hospital level. However, talent development and training got around one-third of the responses, while the other elements of the talent management process got smaller percentages. In general, the study concluded that the talent management concept is immature, vague, and fuzzy among respondents.

Regarding the strategies used for selection, developing, and retaining talents, the study found that the respondents did not use one criterion for talent selection. More, they mentioned contradicting opinions regarding Emiratisation, which aims to select the local talents or to recruit talents from abroad. Additionally, 43.5% of the responses underlined training and support as a crucial strategy for talent development and mentioned other numerous strategies only once or twice. In addition, 45% of the responses suggested incentives and promotions as strategies to retain talents within the hospital, while the rest of the responses were incoherent.

Regarding the hospital strategies and policies, the results of the analysis reflect a major gap in talent management strategies of the UAE hospital as no talent management policy was able to unify the definition of a talent, provide clear criteria for selection, and define strategies for developing and retaining of the existing talents. In addition, the responding informants of multiple departments provided contradicting answers about the presence of the talent pool and people analytics at the hospital.

The results also confirm that organizational factors have a determinant role in both facilitating and inhibiting talent management at the UAE hospital. In particular, management and leadership, IT support, HR department, and training were identified as the most common factors of facilitating talent management. The study confirmed the findings of Al Awadhi (2018) regarding the critical role of management and leadership in facilitating talent management. On the other hand, the results underlined lack of resources, encouragement, motivation, and engagement, absence of policies, and routines, which are the common organizational factors that inhibit the hospital talent management. The results also underlined a few individual factors that inhibit hospital talent management, including diversity, lack of employee interest, etc.

The majority of the responses reflect an understanding of the impact of Industry 4.0 on talent management among respondents, and around one-third of the responses reflect confusion about the nature of Industry 4.0 compared to IT technology. The responses highlighted some skills and competencies that are required to develop talents within the Industry 4.0 era, including specific skills and competencies related to Industry 4.0 technologies and general skills and competencies, such as cognitive skills, managerial skills, etc. Further, the responses related to the development programs and activities of talented people in multiple departments of the UAE hospital were traditional in nature, non-specific, and aim to serve the overall goal of employee training and development rather than the requirements of the Industry 4.0 era.

In summary, the results confirmed that talents are those who have extra positive personal, leadership, or cognitive qualities that make them able to influence organizational performance. Nevertheless, the majority of respondents failed to provide a definite definition of talent management and failed to agree about one criterion for selection, developing, and retaining talents. This was due to the absence of talent management strategy and policy at the hospital level. The results also confirmed the need for specific training and development programs regarding the Industry 4.0 era.

CONCLUSION

The study aimed to explore the talent management strategies and practices of multiple departments of a public UAE hospital and explores the skills, competencies, and programs required for talent management in the Industry 4.0 Era. The result of the study disclosed critical gaps in talent management at the hospital level. The study found no talent management policy in place, which created a state of confusion and fuzziness among departmental managers, head sections, and supervisors about talent and talent management. In consequence, the understanding of talent and talent management concepts varied, and the strategies for talent selection, development, and retaining were undefined and unstandardized.

On the other side, the paper identified many organizational and individual factors that facilitate and inhibit talent management in the UAE hospital. The study confirmed the critical role of management and leadership in facilitating talent management and highlighted the need for employee encouragement, motivation, and engagement. Furthermore, the study marked the need for intensive teaching of the hospital employees about Industry 4.0 and providing them with the relevant skills and competencies, such as data analytics.

Organizations should develop their talent management strategies and programs that fit with their culture, resources, and business. Accordingly, this study could be a preliminary work to build talent management policy and strategies for the UAE hospital. Implementing a new talent management strategy could fill the gaps, clear ambiguity and fuzziness about talent management, attract talents and provide human resources with special skills required for the hospital, and align the UAE hospital strategy with the country national employment strategy 2031.

FUTURE RESEARCH

However, the case study approach was used on a one UAE hospital, which makes generalization of the research findings and conclusions impossible. It is recommended to conduct more research in two ways: firstly, conduct more qualitative research to explore the particular skills and competencies required for certain departments and specialties and secondly, conduct quantitative studies on a bigger sample obtained from various organizations to generalize the findings to the sector or country levels.

AUTHOR CONTRIBUTIONS

Conceptualization: Nabeel Al Amiri.

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Formal analysis: Nabeel Al Amiri.

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REFERENCES

1. Abir, B (2015). *Talent Management in UAE: A study of contemporary practices in the banking industry* (Master's thesis, The British University, Dubai, UAE). Retrieved on March 06, 2020 from <https://bspace.buid.ac.ae/bitstream/1234/999/1/100021.pdf>
2. Al Awadhi, K. M. A. K. (2018). *The implementation of talent management practices in U.A.E. organizations* (Master's thesis). The British University, Dubai, UAE. Retrieved March 06, 2020 from <https://bspace.buid.ac.ae/bitstream/1234/1200/1/2014212170.pdf>
3. Al Mansoori, M. (2015). *A study into the benefits of developing talent management within the public sector: the case of Abu Dhabi Police General Head Quarters – UAE*. Liverpool John Moores University, UK. Retrieved March 06, 2020 from http://researchonline.ljmu.ac.uk/id/ep_rint/4449/1/158256_2015AlMansooriPhD.pdf
4. Al Suwaidi, N. R. (2014). *Training in the UAE context of talent management initiatives: a semi-government organization case study* (Master's thesis). The British University, Dubai, UAE. Retrieved March 06, 2020 from <https://pdfs.semanticscholar.org/bf67/b2450f8670e9add201e830d3637ac777815b.pdf>
5. Andersen, M. K. (2013). *The best definition of talent for your talent management program*. Retrieved January 24, 2020 from <https://mortenkamp.com/2013/01/07/the-best-definition-of-talent-for-your-talent-management-program/>
6. ATD. (2014a). *ATD Competency Model*. Retrieved January 29, 2020 from <https://d22bblmj4tvv8.cloudfront.net/ef/2b/868042df4ace8914a1fe8d4e3db2/certification-faqs.pdf>
7. ATD. (2014b). *The ATD Competency Model: Talent Development Redefined*. Retrieved January 29, 2020 from <https://www.atdchatt.org/resources/Documents/Event%20Flyers/071489.Competency%20Model.pdf>
8. ATD. (2019). *ATD Capability Model Frequently Asked Questions*. Retrieved January 29, 2020 from <https://d22bblmj4tvv8.cloudfront.net/48/d4/af08293944de8e671e1f067a528f/atd-capability-study-frequently-asked-questions-2019.10.pdf>
9. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 109-114. <https://doi.org/10.1177%2F014920639101700108>
10. Bayraktar, O., & Ataç, C. (2018). The Effects of Industry 4.0 on Human Resources Management. In *Globalization, Institutions and Socio-Economic Performance* (pp. 337-359). Berlin: Peter Lang GmbH. Retrieved from https://www.researchgate.net/publication/329706763_The_Effects_of_Industry_4_0_on_Human_Resources_Management
11. Blandford, S. (2009). *Talent remains vital to success in UAE*. Retrieved January 29, 2020 from <https://www.thenational.ae/business/talent-remains-vital-to-success-in-uae-1.485615>
12. Chambers, E. G., Foulon, M., Handfield-Jones, H., Hankin, S. M., & Michaels, E. G. (1998). The ware of talent. *The McKinsey Quarterly*, 3, 44-57. Retrieved from <https://cdn2.hubspot.net/hubfs/3299491/TheWarforTalent.pdf>
13. Collings, D. G., & Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19(4), 304-313. <https://doi.org/10.1016/j.hrmr.2009.04.001>
14. Dirani, K. M. (2018). Talent management and development in the United Arab Emirates. *Advances in Developing Human Resources*, 20(4), 479-497. <https://doi.org/10.1177/1523422318803088>
15. Ford, J., Harding, N. & Stoyanova, D. (2010). *Talent management and development: An overview of current theory and practice*. Retrieved January 25, 2020 from <https://orca.cf.ac.uk/87115/1/talent-management-and-development-an-overview-of-current-theory-and-practice.pdf>
16. Germany Trade and Invest. (2011). *Industrie 4.0: Smart Manufacturing for the Future*. Retrieved 29 January, 2020 from <https://www.manufacturing-policy.eng.cam.ac.uk/documents-folder/policies/germany-industrie-4-0-smart-manufacturing-for-the-future-gtai/view>
17. Hills, J. (2012). *How firms define and execute talent strategy*. Retrieved January 25, 2020 from <https://www.peoplemanagement.co.uk/long-reads/articles/define-execute-talent-strategy>
18. Kamil, B. A. M., Abdul Hamid, Z., Hashim, J., & Omar, A. (2011). A study on the implementation of talent management practices at Malaysian companies. *Asian Journal of Business and Management Sciences*, 1(4), 147-162. Retrieved from https://www.academia.edu/1075214/A_STUDY_ON_THE_IMPLEMENTATION_OF_TALENT_MANAGEMENT_PRACTICES_AT_MALAYSIAN_COMPANIES
19. Keller, S., & Meaney, M. (2017). *Attracting and retaining the right talent*. Retrieved from <https://www.mckinsey.com/business-functions/organization/our-insights/attracting-and-retaining-the-right-talent>
20. KMPG. (2019). *The future of HR – UAE human resources report 2019*. Retrieved February 29, 2020 from <https://assets.kpmg/content/dam/kpmg/ae/pdf/Future-of-hr-2019.pdf>
21. Mckinsey & Company & the Conference Board. (2012). *The State of Human Capital 2012: False Summit*. Retrieved January 25, 2020 from https://www.mckinsey.com/~media/mckinsey/dotcom/client_service/organization/pdfs/state_of_human_capital_2012.ashx
22. McKinsey & Company. (2012). *War for Talents and McKinsey & Company's "Five Elements of a Successful Talent Formula*.

- Retrieved January 25, 2020 from <https://laboureconomics.wordpress.com/2012/05/03/war-for-talents-and-mckinsey-company%C2%B4s-five-elements-of-a-successful-talent-formula/>
23. Oracle. (2019). *Improve Hiring Quality, Efficiency, and Speed with Talent Acquisition in the Cloud*. Retrieved 29 January, 2020 from <http://www.oracle.com/us/products/applications/talent-management-acquisition-2390898.pdf>
 24. PwC. (2012). *Key trends in human capital 2012 A global perspective*. Retrieved 29 January, 2020 from <https://www.pwc.com/gx/en/hr-management-services/pdf/pwc-key-trends-in-human-capital-management.pdf>
 25. Rabbi, F., Ahad, N., Kousar, T., & Ali, T. (2015). Talent management as a source of competitive advantage. *Journal of Asian Business Strategy*, 5(9), 208-214. <https://doi.org/10.18533/ijbsr.v9i4.1264>
 26. Sakshi Shetty, S. (n.d.). *Determining sample size for qualitative research: what is the magical number?* Retrieved March 04, 2020 from <https://interq-research.com/determining-sample-size-for-qualitative-research-what-is-the-magical-number/>
 27. Sareen, P., & Mishra, S. (2016). A study of Talent management and its impact on performance of organizations. *IOSR Journal of Business and Management*, 18(12), 66-73. <https://doi.org/10.9790/487X-1812036673>
 28. Sareen, P., & Mishra, S. (2016). A study of talent management and its impact on performance of organizations. *Journal of Business and Management*, 18(12), 66-73. <https://doi.org/10.9790/487X-1812036673>
 29. Serrat, O. (2010). A primer on Talent Management. *Knowledge Solutions*, 76. Retrieved January 24, 2020 from <https://www.adb.org/sites/default/files/publication/27626/primer-talent-management.pdf>
 30. Shaw, P., & Varghese, R. M. (2018). Industry 4.0 and Future of HR. *Journal of Management*, 5(6), 96-103. Retrieved from <http://www.iaeme.com/JOM/issues.asp?JType=JOM&VType=5&IType=6>
 31. The Chartered Institute of Personnel and Development – CIPD. (2020). *Talent management*. Retrieved February 25, 2020 from <https://www.cipd.ae/knowledge/factsheets/talent-management>
 32. The Chartered Institute of Personnel and Development – CIPD. (n.d.). *Talent management*. Retrieved January 25, 2020 from <https://peopleprofession.cipd.org/profession-map/specialist-knowledge/talent-management>
 33. The Free Dictionary. (n.d.). *Talent*. Retrieved January 24, 2020 from <https://www.thefreedictionary.com/talent>
 34. The United Arab Emirates' Government portal. (2019). *The National Employment Strategy 2031*. Retrieved from <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/the-national-employment-strategy-2031>
 35. van Dijk, H. G. (2008). The talent management approach to human resource management: Attracting and retaining the right people. *Journal of Public Administration*, 43(3.1), 385-395. Retrieved from <https://repository.up.ac.za/handle/2263/8823>
 36. Wang, G. G., Werner, J. M., Sun, J. Y., Gilley, A., & Gilley, J. W. (2017). Means vs ends: theorizing a definition of human resource development. *Personnel Review*, 46(6), 1165-1181. <https://doi.org/10.1108/PR-11-2015-0306>
 37. Waxin, M.-F., & Bateman, R. (2016). Human resource management in the United Arab Emirates. In P. Budhwar & K. Mellahi (Eds), *Handbook of Human Resource Management in the Middle East* (pp. 123-140). Cheltenham, UK: Edward Elgar Publishing Limited. Retrieved from https://www.researchgate.net/publication/292137896_Waxin_Marie-France_and_Bateman_Rob_2016_Chapter_Human_Resource_Management_In_The_United_Arab_Emirates_In_P_Budhwar_and_K_Mellahi_Eds_Handbook_of_HRM_in_the_Middle_East_Cheltenham_Edward-Elgar
 38. Whysall, Z., Owtram, M., & Brittain, S. (2019). The new talent management challenges of industry 4.0. *Journal of Management Development*, 38(2), 118-129. <https://doi.org/10.1108/JMD-06-2018-0181>
 39. World Economic Forum. (2019). *HR4.0: shaping people strategies in the fourth industrial revolution*. Retrieved February 29, 2020 from http://www3.weforum.org/docs/WEF_NES_Whitepaper_HR4.0.pdf

APPENDIX A.

Table A1. Thematic analysis of the survey’s content

	Questions	Themes	F (%)
1	What would you like to add to the definition of talent as “a person who has a special ability and can make a positive impact on organizational performance”?	Total	38 (100%)
		Having technical skills:	9 (23.7%)
		A person who has special skills	4 (10.5%)
		Competent	4 (10.5%)
		Knowledgeable	1 (2.6%)
		Having personal qualities:	13 (34.2%)
		Proactive	2 (5.3%)
		Efficient	1 (2.6%)
		Companionate	1 (2.6%)
		Team player	1 (2.6%)
		Positive person	1 (2.6%)
		Motivated	1 (2.6%)
		Fair	2 (5.3%)
		Flexible attitude	1 (2.6%)
		Responsible	1 (2.6%)
		Social	1 (2.6%)
		Assertive	1 (2.6%)
		Having leadership qualities:	9 (23.7%)
		Encourages his team	1 (2.6%)
		A forward-thinking	1 (2.6%)
		An assertive decisions maker	1 (2.6%)
		The ability to influence others	1 (2.6%)
		Ability to make critical decisions	2 (5.3%)
		Overcome failure	1 (2.6%)
		Handle change	1 (2.6%)
		Spot new trends	1 (2.6%)
		Having cognitive qualities:	5 (13.2%)
		Creative	3 (7.9%)
		Innovative	1 (2.6%)
		Pay attention to details	1 (2.6%)
		Others:	2 (5.3%)
		A person can have multi-talents	1 (2.6%)
Talents could be created	1 (2.6%)		
2	What is your understanding of talent management?	Total	24 (100%)
		Identify talents/ Capture the good initiatives	3 (12.5%)
		Recruit/Attract/Hire of talented employees	4 (16.7%)
		Develop /Improve/ Direct/ Train of talented employees	8 (33.3%)
		Invest in talented people	1 (4.2%)
		Show appreciation to talented people	1 (4.2%)
		Appoint relevant talent to the need	1 (4.2%)
		Releases stress from its staff	1 (4.2%)
		Utilize the full potential of an employee	1 (4.2%)
		Motivate them	2 (8.3%)
		Retain the most talented and superior employees	2 (8.3%)

Table A1 (cont.). Thematic analysis of the survey's content

	Questions	Themes	F (%)
3	How do you select talents in your department?	Total	27 (100%)
		Skills	3 (11.1%)
		Knowledge	2 (7.4%)
		Experience	2 (7.4%)
		Qualification	3 (11.1%)
		Motivation	3 (11.1%)
		Character	2 (7.4%)
		Performance	4 (14.8%)
		People with potentials	1 (3.7%)
		Well-connected employees	1 (3.7%)
		Commitment	1 (3.7%)
		Leadership	1 (3.7%)
		Bring out solutions	1 (3.7%)
		Emiratization	1 (3.79%)
		Recruit talents from outside the country	1 (3.7%)
		Cope with workload	1 (3.7%)
4	How do you develop talents in your department?	Total	27 (100%)
		Do regular performance appraisal	4 (17.4%)
		Work on weak areas	1 (4.3%)
		Meet them	1 (4.3%)
		Training and support	10 (43.5%)
		Seek advice from external consultants	1 (4.3%)
		Get rid of an employee who gets in the way of	1 (4.3%)
		Develop core competencies	1 (4.3%)
		Show them their strength point	1 (4.3%)
		Involve them in decision making	1 (4.3%)
		Coaching	1 (4.3%)
		Give them more responsibilities	1 (4.3%)
		5	How do you retain talents in your department?
Education & Training	1 (5.0%)		
Incentives/Promotions	9 (45.0%)		
Safe environment	1 (5.0%)		
Appreciation/Recognition/Awarding	3 (15.0%)		
Provide opportunities to grow	1 (5.0%)		
Empower them	2 (10.0%)		
Collaboration	1 (5.0%)		
Create a support process and workflow	1 (5.0%)		
Positive work environment	1 (5.0%)		
6	Do you have a talent management policy in your hospital?	Total	13 (100%)
		No	6 (46%)
		I don't know/ not aware/not sure	7 (54%)
7	Do you have a talent pool at your hospital?	Total	13 (100%)
		Yes	6 (46%)
		No	5 (39%)
8	Do you use people analytics at your hospital?	Total	13 (100%)
		Yes	6 (46%)
		Not aware/not sure/no answer	4 (31%)
		No	3 (23%)

Table A1 (cont.). Thematic analysis of the survey's content

	Questions	Themes	F (%)
9	What are the main facilitators of talent management in your hospital?	Hospital factors:	19 (100%)
		IT support	4 (21.1%)
		Cost and Budget	1 (5.3%)
		Management/Leadership	7 (36.8%)
		HR department	3 (15.8%)
		Quality department	1 (5.3%)
		Training	3 (15.8%)
10	What are the main inhibitors of talent management in your hospital?	Total	32 (100%)
		Organizational (Hospital) factors:	22 (68.8%)
		Resource e.g. budget and time	7 (21.9%)
		Routine	2 (6.3%)
		Lack of encouragement, motivation, and engagement	5 (15.6%)
		Absence of policies	2 (6.3%)
		Old management school	1 (3.1%)
		Hierarchy	1 (3.1%)
		Frequent management changes	1 (3.1%)
		Judgment is based only on CV	1 (3.1%)
		Lack of proper communication	1 (3.1%)
		Work overwhelming and stress	1 (3.1%)
		Individual (Employee's) factors:	10 (31.3%)
		Lack of employee's interest	2 (6.3%)
		Lack of local (Emirati) in most of the fields	1 (3.1%)
		Competition	1 (3.1%)
		Diversity e.g. various educational backgrounds	4 (12.5%)
Fear of changes by staff	1 (3.1%)		
Employees are not looking to organizational benefits	1 (3.1%)		
11	In your opinion, how industry 4.0 is affecting (or going to affect) talent management?	Total	27 (100%)
		Answers relevant to industry 4.0	19 (70.4%)
		Make performance measurement more accurate	4 (14.8%)
		Make communication easier and faster	3 (11.1%)
		Make decision making easier	1 (3.7%)
		It could help to find talents	3 (11.1%)
		Decrease the role of humans	2 (7.4%)
		Difficulties in analyzing the real-time data	1 (3.7%)
		Removing redundancy / Improve efficiency	2 (7.4%)
		Create a smarter and more streamlined process	1 (3.7%)
		Get the required data & reports easily	1 (3.7%)
		Use the information to understand the candidates	1 (3.7%)
		Non-relevant answers	8 (29.6%)
		Patient's records can be retrieved effortlessly	2 (7.4%)
		More work-related to system's downtime	1 (3.7%)
		Minimize paper works	2 (7.4%)
		Speed up the work	2 (7.4%)
The tracking systems are improved with the new era	1 (3.7%)		

Table A1 (cont.). Thematic analysis of the survey's content

	Questions	Themes	F (%)
12	What are the skills and competencies required for your department that are relevant to the industry 4.0 era?	Total	37 (100%)
		Industry 4.0 skills and competencies	11 (29.7%)
		Mobile/Smart devices application	2 (5.4%)
		Ability to scale infrastructure –cloud	1 (2.7%)
		Data analysis	3 (8.1%)
		Research	1 (2.7%)
		Knowledge in operating necessary machines	1 (2.7%)
		Create new learning and competency system	1 (2.7%)
		Rapid alert for positive results	1 (2.7%)
		Digitalization	1 (2.7%)
		Cognitive skills	9 (24.3%)
		Critical thinking	1 (2.7%)
		Creativity	2 (5.4%)
		Cognitive flexibility and adaptability	3 (8.1%)
		Complex problem solving	1 (2.7%)
		Learner	2 (5.4%)
		Managerial skills	9 (24.3%)
		Management skills	1 (2.7%)
		Coordination	1 (2.7%)
		Negotiation	1 (2.7%)
		Communication	1 (2.7%)
		Reporting skills	1 (2.7%)
		Business process management	1 (2.7%)
		Judgment and decision-making	1 (2.7%)
		Service orientation	1 (2.7%)
		Ability to change processes	1 (2.7%)
		Others	8 (21.6%)
		IT skills/ Using health information system	4 (10.8%)
		Emotional intelligence	1 (2.7%)
		Social intelligence	1 (2.7%)
Technical skills related to the specialty	1 (2.7%)		
Language courses	1 (2.7%)		
13	What are the talent development programs and activities implemented in your department or hospital that are relevant to the industry 4.0 era?	Total	13 (100%)
		I do not know/not sure/ not aware (5)	5 (38.5%)
		Specific programs and activities	0 (0%)
		Non-specific programs and activities	8 (61.5%)
		Medical Equipment interface, maintenance and reporting system	1 (7.7%)
		Electronic performance assessment	1 (7.7%)
		Automated pharmacy	1 (7.7%)
		Innovation initiatives, application, and surveys	1 (7.7%)
		In-house trainings/seminars /computer literacy	2 (15.4%)
		IT Systems	1 (7.7%)
		Graduate Nurse Program (GNP)	1 (7.7%)