RESEARCH ARTICLE

Employees’ Experiences of Accepting and Adopting HR Analytics: A Phenomenology Study

Mansi Saxena¹, Teena Bagga², Sangeeta Gupta³ and Amit Mittal*⁴

¹Amity University, Noida, India
²Amity Business School, Amity University, Noida, India
³Management Education and Research Institute, Janakpuri, Delhi, India
⁴Chitkara Business School, Chitkara University, Punjab, India

Abstract:

Purpose:
The growing and sustaining needs of today’s globalized organizations lead to a quest for competitive advantages through 3R’s: Reframing, Repositioning, and Reinventing. The current research suggests that these mutations initiate changes and provocations in almost every segment of working culture, fostering mutation for the complete organization leaving employees to accept and act. The study aims to focus on the employee experiences and the implications during the acceptance and adoption of HR analytics.

Design/Methodology/Approach:

Using a qualitative approach, a life-world phenomenology study with 22 employees associated with HR activities or decision-making process for employees and practicing change management were interviewed for 24 – 26 weeks before and after adopting HR analytics. The interviews were analyzed and texted, which was directed at evaluating qualitative meanings through a systematic process. It is then clustered and analyzed for defining themes and the purpose of the phenomenon.

Results:

The study with the sample shows that HR analytics adoption and acceptance is not a cakewalk. The organization has to prepare its employees to adjust to new technology by supporting, encouraging, training, building the right attitude to bring change, and leading in an impactful manner.

Conclusion:

The adoption and acceptance of HR analytics among its users have various steps and criticalities. The study was conducted to highlight the emotions of employees during the transformative move toward technology adoption and usage that will help the organization develop the right model for initiating the use of HR analytics in the working culture. It provides insights and guidance for promoting ease of acceptance and adoption of HR analytics among its users.

Keywords: 3RS, HR analytics, Cakewalk, Attitude, Transformative process, Phenomenology study.

1. INTRODUCTION

The rising pursuance for work and success is segmented, differentiated, budgeted, and considered. This created a hunt for strategic positioning [1] supported by a data-driven centre of excellence. This strategic working demands the need for a highly operative structure and team delivering value, making transformative HR (Human Resource) practices noticeable.

This move is developing a huge paradigm shift engaging in a sustainable working organization, allocating the movement from data to information and now to insight [2]. The recent trend in analytics over measurement in human resources from the 1900s [3] is grounded in data-driven decision-making [4].

Analytics is a discovery in information technology deriving more meaningful patterns of data, making visualization into communication insight. HR is in an advantageous position if it could ripe the benefits from analytics as it supports all functionalities of not only HR but
for the entire organization and stepping for definite return on investment [5]. Thus, HR analytics has created a wave of value creation [6]. The framework of quantifying, predicting, and strategizing has been the scorecards of analytics pursuing HR. Mazor et al. [7] postulated that traditional HR platforms have limited scope to excel. Distinguished six key characteristics were researched for the High Impact HR Operating model, including reporting and workforce analytics, mergers and acquisition, HR technology strategies and system, HR vendor management, HR Program Management Office and HR Governance, making analytics play a key role [7].

HR has wide opportunities to express the values they add to every success step of the organization [8]. The technology has marked an imprint in every domain of the organization, including HR as well. The use of analytics for Human Resource Management is important, but if not parallel with the organization's vision and mission, it may result in the loss of pace for HR to be a strategic partner [9]. HR needs to add pace with the data to gain competitive advantage, i.e., to reframe themselves. Repositioning by developing strategic working [6, 10] in all the functionalities of the business and reinventing by sustaining its presence in the organization is necessary; else, they should be ready to risk their existence [11].

Accepting and adopting HR analytics are not easy processes. The battle starts from understanding the benefits derived [12], moving to social and behavior sets of working, use over and beyond dashboards and HRIS [13], the investment required, economic gain derived [5], and the employees who are supposed to work on and with analytics [14], change management and making predictive models [15]. Analytics is a step ahead of statistical implications and different in its execution approach and deriving benefits [16]. An organization takes several steps to ensure profitable change, but in the end, it is the employee who executes [17] and undergoes a 360-degree shift in the working approach and methodology, asking for descriptive, predictive, and diagnostic analytics [8].

The change addressed by HRs for initiating new segments in the form of analytics is more people-technology-centric. The step is empowering the HRs and not relying on data engineers for any kind of insights [12]. This will bring structural change in the working routines of the HRs and their approach to looking towards the information and insights [9]. IBM, Google, Deloitte, Accenture, KPMG, and SwedBank are a few organizations that brought structural working change to make HR a strategic business partner [2, 8, 11, 17]. One can also claim the introduction of analytics in the HR jobs as a remedial change to solve the observed or realized problems as addressed by Shell in 2017 [7]. In the entire process, employee trust has a relevant role in the reorganization of structure and execution of change, making managers play a role of a change agent. Studies have found that organizations that take considerable time to manage change among employees with trust, commitment [18], developmental approach, and systematic steps [17] add competitive advantage [19].

The study will contribute meticulously to the literature and provide numerous implications for the organizations willing to initiate analytics in HRs daily work routine. The research will provide a solution for the organizations to frame procedures, principles and practices for the easy adoption of analytics by HR practitioners. We executed the study in two phases: before and after HR analytics adoption with the HR professionals working in a large-size Indian manufacturing organization. The sample includes professionals from junior profile to specialist HRs from the age of 31 years to 52 years. All the professionals were well qualified and had an experience of 7 – 18 years in HR roles. The research investigates the adoption and acceptance of HR analytics from HR’s perspective and experiences. Based on the findings, experiences encountered by the respondents and organizational developmental steps provide insights for the formulation of strategy to make comfortable adoption and acceptance of HR analytics among its users.

The rest of this paper is organized as follows: theoretical background, research methodology, analysis and findings, discussion, managerial implication, the future scope of the study, and conclusion.

1.1. Theoretical Background

HR analytics is a field of analytics meant to manage manpower through improving performance, satisfaction, and retention. Analytics has emerged as an array to process, analyze, visualize, and make feasible decisions to ensure the growth of the organization. Analytics is an interactive and collaborative platform that allows users to access and visualize any report to step up for a decision.

Many theories provide explanatory approaches to understanding the adoption behavior; prominently, Innovation Diffusion Theory (IDT) [20] and Technology Acceptance Model (TAM) [21] are some suited theories in respect of the study. The adoption and acceptance of HR analytics require a reframing of the routine jobs, strategizing and repositioning HR as a strategic business partner, and reinventing the new age of tech-HR. The process of introduction of analytics is not oned-sided but rather includes the involvement of top management with the right investment plans, training of the employees, shift of technique and procedure of working, support from the interconnected departments, the right leadership and stress-free execution [1]. Therefore, the organization and employee psychological factors influence the adoption process. Technology-Organisation-Environment (T-O-E) [22] seems more appropriate to the study of the adoption of HR analytics among its users as it holds wider generic constructs emphasizing the applicability and conditions involved in reshaping the working environment. T-O-E takes internal and external factors of the organization into consideration. Since analytics has a lot to do with how socially it is accepted, what least investment can give the best results, how well the concept can be put into execution and how we integrate the technology with HR working routines. TOE supports the study and helps to investigate the psychological change employee experience at the organization-technology and personal level in the adoption of the analytics process.

Technology has important features, such as internal (present prevailing technology) and external (available for adoption). The adoption of technology is dependent on the cost-benefit analysis [23], application and usage [24],
requirements for adoption [7], and trialability [25]. Organization as a factor in T-O-E refers to the resources, procedures, processes, culture, and policies of an organization that impact the adoption [26]. The vision, mission, culture, values, size, structure, method of working, and available technology affect the working approach of any organization [27]. In most cases, support from top management has played an integral role in making the adoption of innovation successful, which at times deals with the training, reengineering, or waterfall approach [28]. The environment as a factor refers to the settings in which the business performs, including nature of organization, type of business, location, products and its range, customers, competitors, government regulations and support and government interventions [27]. The present scenario or changing external pressures, which are often developed from the competition, becomes a source of change or innovation for many, making the organizations perform for survival or gain an advantage [29]. Technology-Organization-Environment is an important factor required in the adoption of innovation in technology, considering business-related concerns in adoption decisions [30]. The study is free from any obligations and has been tested using various IT and IS studies [27]. The framework explains the holistic approach of adding change and value along with describing the impact of diffusing innovations related to technology adoption. Therefore, we adopted this framework for our study.

1.1.1. HR Analytics Adoption

The steaming move of industry 1.0 to 2.0 brought surprising delight for many manufacturing units where they could add value to its product and market [31]. The swift from industry 2.0 to 3.0 has opened a new innovative mindset, where employees can understand the relevance of technology and its acceptance. The wave created by Industry 4.0 demands the holistic intervention of HR to adapt to the provocations of new technologies and working scenarios [32], bringing the need for SMART HR into practice, and yet the time requires SMART HR 4.0 to pursue the strategic role to cope up from continuous automated working culture [33]. Business Intelligence and Automation wangled popularity but raised the toast for the relational database management system (RDMS) [34]. Every new technology creates a segment for data and insightful statistical analysis [35], using the cloud computing concept to handle huge data on a cloud with a technology-organization-environment framework approach, widening the scope and use of analytics.

The technical advancement in the working scenario draws a positive impact on all the sectors and industries across the world. The manufacturing segment, especially in India, registered an upward growth trend along with socio-economical transformations. The debates of manufacturing units to empower women to blue-collar jobs raised towards the use of analytics on the employee front. Mazor et al. [7] reported the positive changes addressed by the working units with the adoption of analytics, i.e., right-sizing the units, empowering the efficient resources, focusing on health and safety, and strategically expanding the units. The process of adoption of analytics is not common rather, it involves huge involvement of both top and working staff and long hours of discussions [32].

Analytics did not turn into the application phase in a day; it took good time to get acceptable and adaptable among the organizations. In the 19th century, analytics placed its first stone when Frederick Winslow Taylor initiated the management exercises to empower employees and make them strategically capable. Analytics began to attract attention when success stories of decision support systems clouded the working areas. Analytics 1.0 foundation was laid by Business Intelligence [36] during the 1950s when one realized that data collection was a tedious task and led to delayed decision-making [37]. Analytics 1.0 is more oriented toward preparing data for analysis rather than putting analytics into action. During this phase, the organizations took the importance of data seriously and started to manage in more meaningful ways, at least for descriptive analytics, if behavioral predictions were not feasible. Analytics 2.0 is marked by the rise of Big Data, volume, variety, especially unstructured and velocity, IoT and faster analytics processing with in-database and in-memory techniques. It is also marked by the rise of predictive analytics, the data scientist, and the creation of digital products (Google, Amazon, Facebook, etc.). While in 1.0, most data was internal to the company, in 2.0, the focus expanded dramatically to data derived from external sources, such as the internet, sensors, the human genome, and text or videos. The movement of analytics 2.0 to 3.0 was not a revolution but rather an incremental upgradation to support the volume, critical thinking and decision making. In the 21st century, employee voice, perfectionism [38], the economic perspective of employees and the application of technology in HR gained attention and resulted in the quick adoption of HR analytics.

HR analytics is a collaboration of human resource metrics and statistical operations [39], driving contributions to organizational performances. HR analytics is a breakthrough from the narrow use of human resource metrics, which only focused on labor issues related to the working of the business plans; HR analytics led to an extension in the use of Business Intelligence and made data accessible and easy for visualization. Organizations, such as KPMG, IBM, Shell, Google, and Microsoft, have stated the strategic advantages of analytics in HR in the areas of talent acquisition, attrition risk management, employee sensitivity analysis, and capacity planning, which has made businesses adopt [10] and gain their benefits [16]. The successful implementation of HR analytics by these organizations motivates other organizations and industries to experience the advantages.

Understanding the research works and cases in the notion of acceptance and adoption of HR analytics [40] left us with the age-old discussion on the worth of manpower between scanning markets, managing risks, and making profits [41]. Employees' worth, employees' efforts [42] and their systematic approach made businesses work even during the crisis [43], but often employees are taken for granted and made to work on changes as and when the business requires, making them accepted as engines of revenue growth and not to react.

In these times, Human Capital Management remains an enigmatic system connecting business processes with revenue-generating customers, actualizing revenue growth engines by
valuing the employee prepositions. Managing change is not a day act. Every individual to group process needs time to cope and respond to change [44]; to foster effective change, the organization must have organizational citizenship behavior, long-term engagement [45], valuation and retention, enforcing human capital analytics be a communicative device [39] and learning experience for its employees. Understanding the benefits one can receive from adopting analytics, it is equally important to understand the employees during this transition phase, which literature fails to explain. From the adoption to the implementation process of analytics, the employees underwent a 360-degree change from work to learning. Employees who are supposed to focus on people management are today asked to learn a technology and automate the work routine with no estimated views or what they think might be a reason. The work is more on ensuring solutions and drawing the right reasons for a problem. Through this change, an employee must have faced lots of emotional, mental, and physical challenges. The research aims to study the employees’ experiences in this transition process of adopting and accepting HR analytics in their day-to-day jobs.

2. METHODS

2.1. Process Flowchart of Research Methodology

The process followed for conducting this research is shown in the Fig. (1).

2.2. Design

Qualitative techniques of the phenomenological life-world approach [46 - 49] were adopted to understand the everyday experiences of employees, though unique for every individual but shared with dear ones or colleagues. The phenomenology approach concentrates on personal experiences one comes across and is suitable for the study in terms of understanding employee experiences of accepting and adopting change in the form of new technology that uses analytics. This study focuses on determining, analyzing, clarifying, and deciding patterns of the phenomena based on employees’ experience, participation, and attainment. It is an open-minded study based on employee experiences and with no researcher’s inferences [50].

2.3. Sample

A phenomenology study is an approach to studying people and people’s approaches, beliefs, assumptions and thoughts on a phenomenon [46]. To seek an in-depth understanding of the area of interest, the study needs to be creditable with the interviews to receive enough insights into the study area but be cautious of not losing sight to study the topic. The different text suggests different size as the sample for the study, but in practice, any sample between 6 and 20 individuals are considered to be sufficient subject to information extraction [47, 49]. Thus, we executed the study with 22 as a sample as we could get sufficient insights to complete the study.

The study was performed with the HR executives, HR managers and HR specialists of a large-sized Indian manufacturing organization established in 1982, having a presence all over the country. The organization has a headquarters in Northern India, and the same location is considered for the study. The total employee strength is 4600 in the Northern region, and the HR department size lies between 1 to 2 percent of the total strength of the region. The organization follows the traditional system of hierarchy and management positioning. The organization has planned to introduce HR analytics as a competitive advantage in business functioning with the approach of quick data visualization and decision-making for strategizing the workforce. The company has studied, reviewed and understood the future needs of analytics and was ready to bring the change in the working culture.

The study includes employees from the HR department who will soon accept analytics as a daily routine, aged between 31 and 52 years. They are educated and gained graduation or post-graduate degree with 7 – 18 years of work experience and are involved in HR activities or HR-related decision-making. The employees were engaged in HR tasks, defining policies and processes, developing HR strategies, recruitment and selection, training need assessment, coordinating projects, employee engagement activities, compensation, performance appraisal, HR audit, and accounting. In totality, these groups of employees work through a defined system and record the HR data of the company in their people software. The software contains all the data of employees working in each department of the organization. Every record, from attendance to existence, is recorded and stored. This helps them in managing routine tasks like compensation, engagement, assignment of projects, circulating important information, or even greeting employees on their birthdays and anniversary.

2.4. Interviews

At the time we approached the organization, they had initiated the discussion on the adoption of HR analytics in their organization. The concept was new and challenging for them as the working scenario in the HR department was not so technical. The documentation style happened on software, but
all calculations and information extraction were manual. The strong bend to bring HR analytics into practice made us investigate the options of study. The organization agreed to conduct interviews with its employees. We planned the interviews in two phases: before, that is, before the adoption of HR analytics, a phase where the organization was preparing their HR employees for a new tech journey, and after, that is, after adoption and acceptance of HR analytics. The after phase focuses on registering the change after the implementation of HR analytics. We had seven months of the gap from before to after, that is, preparing employees for HR analytics from April to June, 2018, and after the implementation of HR analytics from February to April, 2019.

An appropriate time before and after practicing HR analytics was ensured, and employees (HR) were invited to participate in the study. All invited employees wanted to participate and contribute to the study to ease acceptance and adoption of HR analytics. We took permission to conduct, write, and record the study through proper channels of the organization by discussing the purpose of the study, made an appointment one week prior with the respondents to ensure their availability, and we assured to maintain the confidentiality of the organization, respondents, their work processes and data. We conducted the study by keeping the withdrawal of the employees as respondents at any time they wished.

The interviews were conducted in two phases, before the adoption of HR analytics and after the adoption of HR analytics under the identified themes. Table I shows the objectives of phase I and phase II of interviews as per the themes and factors.

The interviewees were 02 senior HR managers involved in strategy formulation, 02 changed managers, 07 functional heads, 03 assistant managers, and 08 were senior executives; they were all aged between 31 and 52 years and directly involved with HR activities and data. All were dealing with reports, either formulation or decision making. In the process, one senior executive changed the organization after 10 weeks of the interview, and therefore that respondent was excluded from the study. The interviews were performed with an open set of questions like Can you describe what you are experiencing when you come to know about a new change in the work scenario? What was your first reaction when you heard about HR analytics? And more explaining questions were asked - can you please explain more, what do you mean, can you please expand a bit more? The interview was conducted in an open atmosphere for 30 – 90 minutes, where the respondents strove to remain open and expressive about their experiences, and some even spoke from their hearts, explaining what was going on in their minds and hearts. The interviews were recorded in audio form and later transcribed. The respondents were assigned a number and marked as (I,x) while recording, where I referred to respondent and x referred to the number assigned to every respondent.

3. ANALYSIS AND FINDINGS

The responses from all interviews were considered and analyzed to extract the meaning of the phenomena [50, 51]. We initiated analysis by reading the whole text several times to generalize the feelings. After understanding the text, we clustered meanings based on the structure of meanings. These clusters were the way to understand the important structures and describe the employee’s experiences in the acceptance and adoption process of HR analytics. To ensure the phenomenology study with valid description, the text was read and re-read several times, and then themes were identified, consisting of all essential employee experiences.

Table 1. Represents the interview objectives in phase I and phase II.

| Themes and Factors | Phase I Interview Objectives – Before Adoption of HR Analytics (April – June, 2018) | Phase II Interview Objectives – After Adoption of HR Analytics (February – April, 2019) |
|--------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Employee Perception – HR analytics use, data and tool availability, change introduction | To know the employees' perception of the use of HR analytics. To know the readiness to adopt. | To know the employees' perception of the use of HR analytics. To understand the change of workflow the employees experienced. |
| Social system and organizational implications – organization support, stress level, peer pressure | To understand employees' perception of the organization's approach to adoption. To know if employees received support. | To understand the workflow and stress level after the adoption of HR analytics. |
| Technology knowledge and intention of use | To know if the employees received training on new technology. | To know if the training, seminars and conferences were helpful. |
| Actual Use and decision making | To know if employees see future growth through analytics. To know where they see the application of analytics. | To know if the employees can perform better. To understand in which areas they can apply analytics. |

4. RESULTS

The phenomena of “successful employee” experiences acceptance and adoption of HR analytics and “right decision making” were expressed in four themes derived from many clusters. Table 2 shows the clusters and themes derived from them.

4.1. The Relevant Meaning of the Occurrence

The employees wanted to perform in the best possible way with the usage of advanced technology. Introducing new practices requires a mutual understanding between the employee and the organization. The association of correlative relation [52] develops trust, productivity and long-term connection between the two. At the time of concerns, the employees together sort out the matter with the support of the seniors and management in practice and witness positive interrelationships [53]. Thus employee performance is affected by the support of the organization and organizational environment, resulting in an upward trend in retention graphs.
Table 2. Themes and Clusters.

| Themes of Meanings                          | Clusters                                                                 |
|--------------------------------------------|--------------------------------------------------------------------------|
| Employee Perception                        | ● Non-technical and not comfortable to use                               |
|                                            | ● Fear of deriving wrong results                                         |
|                                            | ● It is too many statistics                                              |
|                                            | ● The task can be made with coordination from IT teams                  |
|                                            | ● Right decisions making and right predictions                         |
|                                            | ● Anxiety to perform                                                    |
|                                            | ● Knowledge and individual attitude                                      |
|                                            | ● Job relevance                                                         |
| Social system and organization implications| ● Stress from top management                                             |
|                                            | ● Everyone appreciates and accepts analytics in routine projects         |
|                                            | ● Many success stories witnessed                                         |
|                                            | ● Peer pressure to excel                                                 |
|                                            | ● For status and growth                                                 |
| Technology knowledge and intention of use  | ● Attending workshops and conferences                                    |
|                                            | ● Attended training                                                     |
|                                            | ● Hope to apply to right data with the right approach                   |
|                                            | ● Future growth                                                         |
| Actual use and decision making             | ● Employees are perceived to be right-sized, talented and result-oriented|
|                                            | ● Employees work in smooth flow even at the time of changes             |
|                                            | ● Able to visualize better                                              |

“It’s good to know that organization wants to expand through us and have some strategic planning. I noticed that when the management informed us about the new practice through HR analytics, a wave of learning flowed through us. I personally feel I want to learn and grow” (I, 12). "I feel a little tensed and stressed about how I will manage training and my on-going project; I am ready to learn but find it difficult to manage the time. But I definitely need it” (I, 8). “As far as I know, analytics is a combination of operational tasks with statistical applications; I am already using advanced excel, so I hope it would not be so different, but yes, I hope to add some new techniques to my learning curve” (I, 19). “In my 15 years of career, I learned a lot from new channels of recruitment to psychometric techniques of hiring, managing records on excel to port data in the software, and improving performances. I am happy that I have got the chance to learn more and move as per the trends” (I, 2).

4.2. Employee Perception

The introduction of HR analytics was experienced as a logical improvement in the career paths of the employees. There was no reservation of thoughts about practicing the new technique. Each employee has some doubts related to the clarity of practice as to why we and why this is not associated with the IT team, debating the relevance of analytics for HRs [11], how extensively can we justify the investment on us? focusing on the rate of investment [25], does this means a shift in our role? mentioning new tasks and expectations [54]. However, it is difficult to explain the curiosity and anxiety that rush through them but to learn new is felt through the interview.

“I am not a technical person and neither into statistics, I do not know why I am in the list of making use of analytics, for now, I am little confused to say what am I expected from the new role” (I, 14). “I want to learn the new and trending HR development techniques, but I hope it is not too much statistics” (I, 15). “I am excited to be in the new role and happy I am among the selected group. I am looking forward to it” (I, 17). "I hope to justify with the new responsibilities, little nervous about using” (I, 13). “I need it, after all, every organization use marked growth, so now I want the same for my team and be a strategic partner” (I, 1). “Looking forward to conducting right analysis and right decision making” (I, 6). “I am stressed now, already I have so much to do and now more, I hope they increase my pay” (I, 11).

4.3. Social System and Organizational Implication

Change, when supported by leadership and theory of change [55] and further social influence contributes to it [56, 57], becomes more promising. People are moving forward and are open to learning techniques of analytics. The analytics community is encouraging and provides adequate support from time to time through lectures, videos, and online support [58]. The support and encouragement from the surroundings and environment were realized for sure. This authentication came mainly from its user and the organizations, employees and trainers of analytics. It inspires the employees and organizations to adopt analytics in daily routines.

A change manager said with a smile: “no, the employee works its own, the change should be observant, it is the support comes from the team, management and the environment. It is that we need to accept.” (I, 4).

The learning curve for each employee varies as some grasp it quickly, some take time, some understand the right usage and some hold on right decision-making [59]. The variation is addressed as experience, logical framework, data exploration, and understanding of the problem. The challenges may be faced when organizations are more inclined on cost-return analysis, security, poor performance of data and leadership issues [60], making it doubtful for the organizations to practice.

“I am not sure what I am heading for, just doing routine work with dedication. It is definitely for betterment as my friend said, “you are lucky, your organization is investing wisely,” and on the same, I read in Economic Times last month about talented professionals pacing with analytics” (I, 16). “My friend has learned analytics on R and receives good support from the community” (I, 13). “Management wants to change for betterment, and we are ready for implementation. My colleges are working for it, and I am also moving along with them” (I, 12). “IBM, Shell and many organizations have gained advantages, and I also want to experience” (I, 2). “My manager and team members are fully supportive despite my health issues. I feel blessed to be part of the organization that is so supportive and could see my capabilities; I am ready for it” (I, 20).

Employees who are themselves ready see support in their environment, be peer, management, trainer or online community. Experiences have described positive affirmation for the use though sometimes reflected through the worry of learning rightly, right application or right decision making [61].
At times, when employees want to invest more time in learning, the routine jobs extract the concentration, making it difficult to participate. At times the attitude of employees makes a difference in learning and adoption, contributing to a noticeable impact.

“I want to be an early practitioner but do not have time to learn” (I, 12). ## “I spend one hour daily taking online lectures on analytics” (I, 14). ## “I am focused and talk to a friend who already uses analytics in his job” (I, 16). ## “I have joined R community; it is helping me” (I, 19). ## “I am hopeful of making a difference after analytics” (I, 1). ## “I am a slow learner, really stressed on its implementation” (I, 17).

4.4. Technology Knowledge and Intention of Use

Half a battle of change is met when supported by proper training and clarified on its purpose and application. The organization has invested rightly in training off the job for employees on analytics and supported them with online lectures. Employees were quite satisfied with the strategy of change the organization implemented but were often concerned about the completion of projects they were presently handling on time.

“I am enjoying the learning phase, and when we know where we are heading, it is more fun” (I, 2). ## “Back to school…amazing feeling to sit and only study, more relaxing” (I, 6). ## “I am better with the training sessions and live sample study” (I, 11). ## “Last day I attended a conference on analytics, it is good to know from the researchers the possibilities to applications” (I, 3). ## “I heard soon after training sessions, we would be provided with a quick workshop on the weekend; I am feeling confident to practice now” (I, 14). ## “I feel it is an extension of what I was practicing before, with quick visualization and quick reporting” (I, 15).

4.5. Actual use and Decision Making

The implementation of desired technique by the employee adds concern to success. After training and informed use, the employees were ready to practice in real data sets. The application was on the same data set initially, which they derived from the system and tried to trace the difference with the analytics approach on work. They were cautious in its usage as it has many applications but what fits the problem is what the employees were exploring.

“I am trying to look at the same data with analytics as application, and I am happy to see a remarkable difference” (I, 8). ## “I was previously stuck with recruitment data and improving the process, and now we found a way out but were quite slow to identify” (I, 12). ## “I am surprised to see a shift in our cost curves and quite happy to report the teams who are slow performers are able to address the issues through analytics” (I, 4). ## “I am planning to explore analytics to employee engagement, employee behavior and leadership. I want to see where we are strong as manpower and how we can contribute strategically” (I, 2). ## “I made big loops initially to understand its applications. Probably the slowest in the team, but I would like to admit my colleagues helped me to pace up. Still not great but learning to my best” (I, 17). “It helped me to have ease of data visualization of the huge data set. I could analyze and even attempted predictive model” (I, 5).

Organizations invest time, money and efforts to train and bring a change towards the use of analytics. The focus starts from the need to change HR to HR business partners. The entire process has brought changes in the HR working system. The 3Rs: reframing, repositioning, and reinventing, were activated for HRs. Reframing refers to redesigning HR with technological structure, that is, through data and tools to study data. Repositioning refers to the new strategic positioning of HR in the organization. This needs an organization to prepare itself with the cost, tech infrastructure, competitors, and performance measures. Reinventing as HR must work on a new platform with a new set of performance parameters. The inducement of HR analytics has made HR strategic business partners, leading the involvement of HRs in strategic decision-making. Table 3 shows the factors (T-O-E) across the study and the frequency of respondents in acceptance of the statement.

Table 3. Factors and respondent’s frequency in acceptance of the statement

| Context                                                                 | No. of Agree Responses, N = 22 |
|------------------------------------------------------------------------|---------------------------------|
| Reframing - Data and Tool Use (T)                                      |                                 |
| Structuring data [62]                                                   | 11                              |
| Linking data, and business objectives [62]                             | 20                              |
| Recording of data [63]                                                  | 22                              |
| Repositioning - Preparing organization (O)                              |                                 |
| External environment analysis – Customer, government, and competitors [64]| 04                              |
| Cost analysis [65]                                                     | 17                              |
| Performance reports [66]                                               | 13                              |
| Requirement of technology infrastructure [67]                          | 15                              |
| Reinventing - Preparing employees for new role/working environment (E)  |                                 |
| Information about the use of analytics [68]                            | 18                              |
| Communicating the new roles [65]                                       | 06                              |
| Explaining through informal linking [69]                               | 19                              |
| Training through seminars, conferences and workshops [70]              | 12                              |
| Training on the job [71]                                               | 12                              |
| Management support in learning and adopting [72]                      |                                 |
| Leadership [73]                                                       |                                 |

5. DISCUSSION

The analysis shows that the employees in our study who accepted and adopted HR analytics in their daily routines experienced correlative interrelations with the organization, working environment, and peer members, which created a layer of positivity for them to bring analytics into routine jobs. Both employees and their leaders expressed fear, curiosity, and willingness to work with analytics. The proximity of fear was more in the middle management than lower and HR specialists. Adoption of HR analytics was decided by the management but executed by the employees who could be successful due to moderating the mediating role played by the perceived human resource management practices to organizational citizenship behavior and intention to grow strategically [73].

It is important to practice change in a systematic and
planned procedure [74]. In this study, employees transformed their roles and practices. They were reframed through new technology adoption, repositioned themselves as a strategic business partner and reinvented their roles in the business success.

The expression of willingness and ability to use analytics, explore data, or practice predictive modeling confirm the acceptance and adoption of HR analytics. This also explains the background required to make new technology acceptable by clarifying the purpose of use, seeking various areas of application [13], preparing employees for development [76], understanding their learning curves through training and increasing employee willingness, productivity and turnover [77], and making successful implementation of new practice through user satisfaction.

In particular, the leadership, organizational support, and environment assure smooth application [78], turning best supportive act for the employees who were unsure of change, confused about the usage, and unaware of application. Interestingly, the employees at all the management levels were not carried away by the negatives, such as heavy working hours, learning after work or taking online sessions from home, they encountered in the passage of learning and application; perhaps this was with the support employees have both at work and home. This brings our focus that HR analytics is not the job for only technical professionals, one must not require being a gold medalist or expert in Mathematics or Statistics, and one need not work on the servers or database management. These are only pre-adoption fears an employee encounters but subside when experiencing real application, i.e., possible with love for numbers and willingness to extract information from the data.

Concerns were addressed in the process from acceptance to adoption and then drawing results. It was easier to practice in the training sessions on dummy data sets or attend tutorials online that to practice in real. Employees went through emotional and structural changes [79, 80]. At an early stage, everyone was supportive, but with passing days pressure builds in to perform and actualize profits. Leveson [25] mentioned in his study that individual factors and group factors have relevance in the adoption of HR analytics, where the actual application is far more comfortable if an employee and organization conquer the midway dilemmas of acceptance and adoption. This, though, builds stress for the working managers and team about the method and its benefits. Some employees also expressed concern about failing in the analytics process and losing hope of gaining insight when practicing. This fear was overcome when they started to work as a team, exploring the various applications, and sometimes even tried the hit-and-trial method as it is for first time for all of them. It was undoubtedly marked; they all succeed when working as one.

“Analytics was a basis for Strategic Workforce Management” one of the themes -actual use and decision making. Noticeable unrest was there initially, but a strategic advantage was gained thereafter when they could apply it in improving recruitment techniques, strategic workflow, actualizing performances and making profits from “HR” and calling them Strategic Business Partners. This justifies the previous research [81 - 84] and shows in particular that the mutual relationship between the employee and the organization is essential for the smooth adoption process with timely investment in employee training. Leadership and organizational environment expression turned into a tool for employee sensitivity and reciprocity in the process of acceptance and adoption of HR analytics.

In all, employee stress cannot be ignored in the entire process, stress to meet the on-going targets, stress to learn as quickly as possible, stress to meet future expectations, stress to bring application as a routine job, stress to make the right decision, and stress to give returns. We cannot overlook the pressure on employees to describe positive experiences when the interviews were with the managers or seniors, even if we attempted to conduct in open concepts. In totality, all 20 interviews with 22 employees contributed many meanings to the study of the phenomenon.

6. THEORETICAL AND MANAGERIAL IMPLICATION

Given the extent of skills and competencies required for an analytics job, HR resources need to integrate well with the technology and their purpose to gain a strategic position in the organization. To study the experiences of employees in the process of accepting and adopting HR analytics, the T-O-E theory was applied. The theory suits well to take considerations from all segments, but while studying, it was found that psychological factors have influenced the process as employees often seem to be guiding, counseling, and supporting themselves. The exchange of knowledge and training materials were also seen. The support within and emotional motivation brings a new zeal to work. Work-life balance contributed well toward the new learning journey of the employees. A lot of factors were covered in an organization and environmental factors, but it would be useful if we also included psychological factors.

The study revealed that as every new thing brings excitement with anxiety and fear, so does the adoption of HR analytics for HR professionals. The fear of numbers and mathematics, lack of quantitative skills, lack of analytical approach, or fears influenced by social connections showed some reluctant behaviour traits in the studied group. As postulated by Venkatesh et al. [85], fear appeals are common and usual to counter in the adoption of technology as their traditional working system is now transformed into digital working, leaving transformation from every working segment. These fear appeals can be dealt with persuasive communication, allowing employees to discuss their points of view.

The new tag of HR as HR Business Partner has increased the concerns on the shoulders of HR professionals to attain all information about the business and its working, instead of managing human resources of the organization only. This calls for more strategic participation and decision-making for its members, both locally and globally, initiating the use of HR analytics. The users of HR analytics should extend mentoring to the non-users and scale the gap along with organizations to support and stand in these mentoring activities, resulting in the improved comfort level of using analytical tools for better decision making.
Organizations must exert in removing the barriers to the adoption of analytics. The study showed that users had a hesitation to initiate, fear of performing, social pressure and self-efficacy. The most likely and accepted ways appear to be e-training, support, rewards and appreciation of use. These activities can also be used to build a positive working environment and increase the adoption of HR analytics. Frontline managers should play the role of leaders to give a positive push and motivate the users to adopt.

The learning curve never ends, and analytics continue to attract positive force into practice but with many emotional, organizational, and structural challenges. The challenges faced by the organization in making successful implementation of HR analytics are in the form of employee acceptance and adoption, which can be a major cause of failure, as people who suppose to operate are not willing, resulting in high cost and a huge loss. The theories and this study have revealed that the acceptance and adoption of analytics among HRs should be a well-organized process followed by good leadership, hands-on training on various analytical and business intelligence tools, partial engagement before initiating complete execution, and a healthy working environment rather than stress to perform.

Another interesting finding was the application of HR analytics in the working routine has brought a positive change, especially in terms of cost. As cost always plays a huge role in running a business, conscious efforts are required from HR to have bias-free hiring. However, unconscious or hidden factors like gender, region, the horn effect, or preferred interest are uncontrollable and lead to intuitive hiring. The application of HR analytics has impacted the business as objective measures are taken into account. The outcome has a noticeable positive impact on human capital, individual performance, and retention of employees.

A manager should extend appreciation and support toward the learning function of the role. A small tap of appreciation on the shoulder has boosted the morale of the employees and expressed willingness to the innovative application of HR analytics. Finally, there are unturned corners of people management like achieving employee satisfaction, employee empowerment, and potential management, which can be with efficiently with more organized data, tool availability, room for innovation, and reduced stress working.

7. FUTURE RESEARCH

Researchers can include the psychological component in the T-O-E approach to create a framework and test the results. The study can facilitate researchers to conduct a quantified study on the experiences of the employees on the adoption of HR analytics and can validate. There can also be a study on the innovative use of HR analytics and its impact on employee satisfaction. The employee experiences can be studied at rank-and-file levels and can highlight if there is any difference in factors of adopting and accepting technology in work routines. Researchers can also validate the various factors, such as self-efficacy, quantitative self-efficacy, fear appeals, training, tool availability, and data availability, along with their impact on strategic workforce management in the adoption process.

CONCLUSION

The employees who contributed to the study desired to learn a new and trending technique, i.e., HR analytics; though not sure in the beginning, the time information flow from managers and management made them ready to explore new phenomena. The employees experienced positive results as they now use analytics as a routine job, strategizing work and workforce, making the right decisions, and generating profits. The support, encouragement, and training from the organization and the right attitude to bring change and leadership considerably impacted the acceptance and adoption of HR analytics. The study motivates other organizations, irrespective of their size and nature, to introduce HR analytics as routine and extract desirable insights to be strategic partners with the only challenge to manage the attitude of employees and arrange the right training for the users.

LIST OF ABBREVIATIONS

| IDT    | Innovation Diffusion Theory |
| TAM    | Technology Acceptance Model |

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study is based on a survey of humans as respondents. Their consent was received when the data were collected. No personal details of the respondents have been shared in this manuscript.

HUMAN AND ANIMAL RIGHTS

No animals were used in the studies that are the basis of this research. All the humans used were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national) and with the Helsinki Declaration of 1975.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIAL

The authors confirm that the data supporting the findings of this study are available within the article.

CONSENT FOR PUBLICATION

Informed consent was obtained from the respondents.

FUNDING

The study received no funding.

CONFICT OF INTEREST

The authors have no conflict of interest to report.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

[1] Huselid MA. The rise of HR: wisdom from 73 thought leaders. HR Certification Institute Publisher 2015.
[2] Brockbank W, Ulrich D, Kryscynski DG, Ulrich M. The future of HR and information capability. Strategic HR Rev 2018; 17(1): 3-10. [http://dx.doi.org/10.1108/SHR-11-2017-0080]
Saraswathy R, Vaijayanthi P, Shreenivasan KA. A snapshot of HR.

Harris JG, Craig E, Light DA. Talent and analytics: new approaches, innovation. Lexington, MA: Lexington Books 1990.

Tornatzky LG, Fleischer M. The processes of technological change. In: Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. Management Info Syst Q 1989; 13(3): 319-40. [http://dx.doi.org/10.2307/249008]

Vargas R, Yurova YV, Ruppel CP, Vandenberghe C, Picci P. Science. Springer, Cham 2020; p. 1251.

Peisl T, Edlmann R. Exploring Technology Acceptance and Planned Organizational Behavior. Int J Inf Manage 2017; 37(3): 426-37.

Lismont J, Vanthienen J, Baesens B, Lemahieu W. Defining analytics maturity indicators: A survey approach. Int J Inf Manage 2016; 37(3): 136-41. [http://dx.doi.org/10.1016/j.ijinfomgt.2016.12.003]

Mazor AH, Volini E, Stephan M, Alburey A, Bowden M. The High-Impact HR Operating Model. Available at: www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/gx-hc-high-impact-hr-pov.pdf

KPMG. 2015. [http://www2.deloitte.com/content/dam/kpmg/pdf/2015/04/evidence-based-hr.pdf]

Lawler EE, Levenson, A, Boudreau JW. HR Metrics and Analytics – Uses and Impacts for Effective Organizations, University of Southern California 2004.

Vargas R, Yurova YV, Ruppel CP, Vandenberghe C, Picci P. Individual adoption of HR analytics: a fine-grained view of the early stages leading to adoption. Int J Human Res Manage Conceptual and Empirical Discoveries in Successful HRM Implementation 2018; 29(2): 3046-67. [http://dx.doi.org/10.1080/00483488121249120]

Battistelli A, Montani F, Odoardi C, Vandenberghe C, Picci P. Employees’ concerns about change and commitment to change among Italian organizations: the moderating role of innovative work behavior. Int J Human Res Manage 2011; 12(8): 1234-50. [http://dx.doi.org/10.1080/09585190110083776]

Kapoor B, Kabra Y. Current and future trends in human resources management in Industry 4.0. 6th CLF - 6th CIRP Conference on Learning Factories 2016; 54: 1-6.

Lawler EE, Levenson A, Boudreau JW. HR Metrics and Analytics – Uses and Impacts for Effective Organizations, University of Southern California 2004.

Brown B, Gottlieb J. The need to lead in data and analytics Available at: http://www.mckinsey.com/business-functions/business-technology/our-insights/the-need-to-lead-in-data-and-analytics/

Rogers E. Diffusion of Innovation. New York, NY: Free Press 1995.

Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. Management Info Syst Q 1989; 13(3): 319-40. [http://dx.doi.org/10.2307/249008]

Tornatzky LG, Fleischer M. The processes of technological innovation. Lexington, MA: Lexington Books 1990.

Harris JG, Craig E, Light DA. Talent and analytics: new approaches, innovation. Lexington, MA: Lexington Books 1990.

Vargas R, Yurova YV, Ruppel CP, Vandenberghe C, Picci P. Individual adoption of HR analytics: a fine-grained view of the early stages leading to adoption. Int J Human Res Manage Conceptual and Empirical Discoveries in Successful HRM Implementation 2018; 29(2): 3046-67. [http://dx.doi.org/10.1080/09585190110083776]

Kapoor B, Kabra Y. Current and future trends in human resources management in Industry 4.0. 6th CLF - 6th CIRP Conference on Learning Factories 2016; 54: 1-6.

Brown B, Gottlieb J. The need to lead in data and analytics Available at: http://www.mckinsey.com/business-functions/business-technology/our-insights/the-need-to-lead-in-data-and-analytics/

Rogers E. Diffusion of Innovation. New York, NY: Free Press 1995.

Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. Management Info Syst Q 1989; 13(3): 319-40. [http://dx.doi.org/10.2307/249008]

Tornatzky LG, Fleischer M. The processes of technological innovation. Lexington, MA: Lexington Books 1990.

Harris JG, Craig E, Light DA. Talent and analytics: new approaches, innovation. Lexington, MA: Lexington Books 1990.

Vargas R, Yurova YV, Ruppel CP, Vandenberghe C, Picci P. Individual adoption of HR analytics: a fine-grained view of the early stages leading to adoption. Int J Human Res Manage Conceptual and Empirical Discoveries in Successful HRM Implementation 2018; 29(2): 3046-67. [http://dx.doi.org/10.1080/09585190110083776]

Kapoor B, Kabra Y. Current and future trends in human resources management in Industry 4.0. 6th CLF - 6th CIRP Conference on Learning Factories 2016; 54: 1-6.

Brown B, Gottlieb J. The need to lead in data and analytics Available at: http://www.mckinsey.com/business-functions/business-technology/our-insights/the-need-to-lead-in-data-and-analytics/

Rogers E. Diffusion of Innovation. New York, NY: Free Press 1995.

Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. Management Info Syst Q 1989; 13(3): 319-40. [http://dx.doi.org/10.2307/249008]

Tornatzky LG, Fleischer M. The processes of technological innovation. Lexington, MA: Lexington Books 1990.

Harris JG, Craig E, Light DA. Talent and analytics: new approaches, innovation. Lexington, MA: Lexington Books 1990.

Vargas R, Yurova YV, Ruppel CP, Vandenberghe C, Picci P. Individual adoption of HR analytics: a fine-grained view of the early stages leading to adoption. Int J Human Res Manage Conceptual and Empirical Discoveries in Successful HRM Implementation 2018; 29(2): 3046-67. [http://dx.doi.org/10.1080/09585190110083776]

Kapoor B, Kabra Y. Current and future trends in human resources management in Industry 4.0. 6th CLF - 6th CIRP Conference on Learning Factories 2016; 54: 1-6.

Brown B, Gottlieb J. The need to lead in data and analytics Available at: http://www.mckinsey.com/business-functions/business-technology/our-insights/the-need-to-lead-in-data-and-analytics/

Rogers E. Diffusion of Innovation. New York, NY: Free Press 1995.

Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. Management Info Syst Q 1989; 13(3): 319-40. [http://dx.doi.org/10.2307/249008]

Tornatzky LG, Fleischer M. The processes of technological innovation. Lexington, MA: Lexington Books 1990.
