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EFFECT OF HR ANALYTICS USAGE ON AWARENESS, TECHNOLOGY AND DECISION MAKING: A STUDY OF MEDIUM AND LARGE ORGANIZATIONS

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ABSTRACT: -

There is an increasing demand for Big Data and Analytics in the business environment and Human Resource (HR) as a function is also catching up with the investments in HR Analytics. Interestingly several of its applications are possible which has potential to enhance HR decision making and functioning. The purpose of this article is to look into applications of HR Analytics and specifically look at the drivers like awareness, technology use and impact on decision making. To understand the use and adoption of HR Analytics in various HR functions this research has used a questionnaire with Likert Scale to get the respondents views across various parameters. The questionnaire was presented in both on-line and physical form to get desired number of respondents. It is interpreted from the study conducted by the researcher that with increased use of Technology and adoption of HR Analytics there is an increase in application level of HR Analytics in various HR Functions. It was found out that there was no difference in the opinion on Application in HR function with the use of HR Analytics amongst the population distribution between the senior level managers and the middle level managers. Again very strongly goes to prove that the technology utilization and adoption is indeed a very driver of HR Analytics and a very important attribute to successful implementation.

KEYWORDS: Workforce planning, HR analytics, managerial level, critical success factor.



INTRODUCTION:

The last decade and half there has been momentum on use of Analytics in general and good amount of work internationally has been done on HR Analytics. Organizations of repute have established HR Analytics teams which are churning the data and continuously releasing analyzed report with greater insights. This means there is an intent to deviate from traditional dashboard reporting and analysis.

There is abundance of literature on HR Analytics which spans from a mere understanding or awareness level to the use of Analytics to prescriptive stage. Business impact was clearly pursued by many researchers and there is enough literature on the validity

of this with the use and adoption of HR Analytics. The models suggested by some of the active researchers and practitioners has been phenomenal and bound to drive the desired business results.

Various HR Functions does consume the services of HR Analytics and there is a good literature on it. Of course it is imperative to equip the team with the requisite knowledge and skills of driving an HR Analytics agenda though. It is also observed through these literature that the method to reach these business goals is through incremental change, control and enablement of the HR processes which collectively yield the results with adequate decision making.

There is a strong sentiment with the presentation of the data thus collected which also plays a significant role in the success of HR Analytics program in the organization. Data visualization and storytelling techniques were found to have a good level of acceptance and several literature data points suggested the same.

LITERATURE REVIEW:

HR analytics is Process Analytics at the grass root level, incorporating key metrics pertaining to areas of operation within HR. Verticals that are process driven and find ease of functionality using analytics are Selection, Performance Management System, Competency Development, Training & Development, 360 degree feedback process, employee engagement et al (Alec R. Levenson, February 2005)

CRITICAL ASPECTS OF TALENT MANAGEMENT VIA ANALYTICS:

Although Talent Management engulfs the entire life cycle process of an employee from entry to exit which involves training, succession planning, compensation et al. The focus here has been laid on three critical components namely Sourcing, Recruitment & Attrition for the purpose of mapping the important aspects associated with them.

• Sourcing

HR has embraced the concept of Talent Analytics, with the core focus moving from transnational to strategic functions. Big Data enables the Organizations to co-relate their workforce planning efforts to Talent Acquisition methodologies. Organizations that have failed to implement these technology enabled Analytical systems would continue to find themselves frantically scrambling to fill in vital positions across the Organization structure. Leveraging Big Data and the related Quantitative approaches is a key enabler in driving talent acquisition strategies in an efficient and cost-effective manner. At a strategic level, the process of sourcing can be driven forth by talent mining - which has the capacity to transform Human Capital data into informational and competitive advantage. These methodologies can analyse data for talent discovery, identification of required personnel and acquisition. The next Frontier in implementation of Talent Acquisition strategies related to sourcing would require the building of data warehouses and usage of Business Intelligence solutions that can enable fact based decisions. Talent Mining hinges on the process of Information Retrieval - the science of searching relational databases and the internet. The queries being generated by the HR Department needs to focus the individual needs of the organization. Talent Mining has the capacity to a higher degree of predictive control over critical candidate variables than any other sourcing methodology. The emergence of shallow and unstructured data can result in less predictive control over the matching of critical variables.

Business Intelligence in itself has the capacity to enhance the process of Sourcing by discovering, identifying and analyzing the internal data to gain a certain insight and enable better decision making (Orijit Ghosh, SannahManuja, Ankita Sehwat, Beas Banerjee,2014). This requires access to specialized and centralized repository data which is designed to facilitate reporting and implementation of analytics.

• Recruitment

This is the point of inception of the talent force into the organization. It has to be handled systematically incorporating the best practices established in the industry. It needs to pay close attention to the various costs that are being incurred and simultaneously should have a justification for the same which can be highlighted by the short and long term advantages of the benefits that the organization is expecting over a period of time both

in terms of tangible monetary contribution and other intangible factors like contribution to the organizational culture and value addition to the knowledge base.

- **Compliance process**

After initial manpower requirement mapping and internal creation of posts which are then made available, the focus has to then be laid upon the facets of generating a candidate pool by mapping the role-set competencies to the various features of the resumes obtained. This is the aspect of response management where careful filtering and scrutiny has to be implemented to ensure the selection of the right pool and also the response time has to be shortened by pro-actively engaging with the aspirant pool.

- **Screening and Assessment**

This is the process of further scrutiny of the filtered pool to ensure the final selection into the talent pool of the company. This stage can be considered the most expensive, time consuming and also requiring the best resources of the company. This facet is gradually going to decide the quality of hire. The further breakdowns of the component include short listing, testing, interview, background check et al.

- **Competency model assessment**

This is a component of assessment which needs to be incorporated in every organization, to ensure the selection of people who can probably have a superior performance based on the skills and behavioural.

- **Hiring and On-boarding**

This is the final phase of the core recruiting process and involves extending the offer to the selected candidate, recording the acceptance ration from various sources for analysis, on-boarding and verification and enrolment of the employees in the HRIS portals.

- **Attrition**

More and more HR managers are turning to big data to not only find the right people for the right positions but also for coping up with high attrition rates.

It is no secret that underperforming employees hinder monetary results, but the cost associated with replacing a worker can far outweigh the cost of what an employee is being paid. Talent Analytics predictive model shows that “one ‘hire’ wipes out the value of three great hires”. Globally, it is estimated that employee turnover will rise sharply in 2014, with an estimated 161.7 million workers leaving their current positions for new employment (Oriji Ghosh, SannahManuja, Ankita Sehrawat, Beas Banerjee,2014). Traditionally, for attrition is reported from the last year or over a period of time, but this practice gives little insights for problem solving including how to predict who will leave or how to hire people who will stay. To predict this, companies can pull a multitude of different metrics, including attendance records, efficiencies, KPI (key performance indicator) adherence, among other trends, to find patterns of behaviour in employees who left.

One of the pioneer industries, which apply these measures for attrition, is call centre industry. Leading example of a company using big data to reduce attrition is Xerox. Xerox implemented big data with an aim to recover \$ 5,000 (amount spent on hiring and training of employee) worth of work from every employee, before they leave. After the initial trial period of six months, the company was able to reduce its attrition rate by 20%. This was done mainly by identifying people with right skills for each job and thus reducing attrition(Oriji Ghosh, SannahManuja, Ankita Sehrawat, Beas Banerjee,2014). Traditionally, HR managers rely on interviews and past experience, but it has proved to be ineffective for call centre industry. To counter this ineffectiveness, personality tests and data analysis were used to predict specific outcomes such as whether a prospective hire will quit the company or whether an employee would steal information.

There are many big IT players who provide talent management software along with whole gamut of services including change management for implementation. IBM is a leading player in this arena, providing various services and software modules including data that gives business leaders access to workforce analytics

and behavioural assessments to understand individual, job, team and organizational traits that define top performers. It will enable clients to assess current workforce readiness to address existing and emerging business demands. It also helps companies in guarding against future talent attrition by helping organizations compile and analyse high-volume workforce data – from exit interviews to real-time SaaS based employee analysis – to understand risk factors, identify employees likely to leave and build new programs to reduce the risk of attrition.

The workforce capacity planning is about developing human resource with necessary skills to deliver effective services in the future. Unless an organization can develop and well manage skilled people it will find it difficult to keep pace with the increasing demands for high performance, competitiveness and efficiency (IPMA-HR, 2002).

The Metrics of Workforce Planning:

So how does an organization conduct a supply analysis and a demand analysis so thoroughly and so authoritatively that a gap analysis turns the compass point straight to the directions an organization must follow to have the right people in the right job at the right time? There is no universal approach in this regard. However, it seems to be absolutely key to the success of workforce planning (Momin W. Y. M., and Mishra K., 2015).

Getting from supply to demand not only relies upon the knowledge of trends that may be recognizable from the workforce of the past (that is, those internal and external forces that are in large part identifiable) but it also may rely upon a future that can't be quantified. Unfortunately, internal and external forces yet to be revealed certainly keep the practice of workforce planning and the calculation of planning metrics from being simple.

TRENDS IMPACTING WORKFORCE PLANNING:

More than 20 years of study by i4cp researchers on workforce and talent planning point to several reasons why WFP activity is slowly increasing. These include;

- More human capital measurement: Tight economics mean companies are measuring more to leverage investment and cut costs. “People are our most important asset” has moved from business platitude to business metric in many high-performing companies.
- For example, i4cp’s 2010 Talent Management Measurement Survey documented 20 percent of companies had a “disciplined and cohesive effort” to gather and use employee-related metrics in their organizations. Nearly 44 percent reported using regular workforce analytics/reports (Leisy, B and Pyron D., 2009).
- Increased use of predictive analytics and big data: High performers have gone further with advanced measurement approaches, specifically predictive analytics and statistics. Technology and the ability to manage big data sets have given rise to predictive analytics to identify core relationships in performance data. Advanced modelling and statistical analysis skills have come into high demand, according to i4cp’s 2011 WFP survey. Identifying relationships through correlation has, in turn, led to better identification of critical workforce segments that add more to the bottom line or enhance growth and innovation.

A number of challenges hinder steady progress in workforce planning. The top three challenges include lack of resources, technologies that do not share data effectively and a rapidly changing business environment. Other challenges include a lack of workforce planning know-how, ineffective communications across business functions and unreliable data. A key factor in the successful evolution of WFP capability is sponsorship. Learning leaders should be especially aware of what and how information is reported to higher levels of the organization. WFP has the attention of the CEO in a third of organizations and of the board in a fifth of organizations, according to i4cp research, but not always with the messaging that accompanies business impact or action planning.

OBJECTIVES:

The purpose of this research paper is to look into HR Analytics usage and its general applications in HR leading to impact on decision making. Further the paper attempts to examine the relationship between applications of HR analytics and the technology required for HR analytics, Awareness, decision making,

representation of the HR analytics results.

HYPOTHESES: There is no association found in Application of HR Analytics in various HR Functions across different managerial levels within the organizations.

H1o: There is no relation between awareness of HRA and application of HRA

H2o: There is no relation between Decision making capability and Application of HRA

H3o: There is no relation between Technology and Application of HRA

H4o: There is no relation between Application of HRA and Representation of HRA outcomes

RESEARCH METHODOLOGY:

The purpose of the research work is to examine the use of HR Analytics to drive decision making resulting in business impact. This study further aims to assess the relationship between the various constructs in terms of implementation and outcomes derived. Effect of demographic factors on the analytics practice is assessed as well. Hence, this type of research is descriptive and empirical in nature.

Analysis:

Analysis to check the relation between Awareness and Application of HRA

H1o: There is no relation between awareness of HRA and application of HRA

Table 1

| Descriptive Statistics | | | |
|------------------------|------|----------------|----|
| | Mean | Std. Deviation | N |
| Awareness | 3.83 | .458 | 93 |
| Application | 4.10 | .567 | 93 |

Table 2

| Correlations | | | |
|--------------|---------------------|-----------|-------------|
| | | Awareness | Application |
| Awareness | Pearson Correlation | 1 | .339** |
| | Sig. (2-tailed) | | .001 |
| | N | 93 | 93 |
| Application | Pearson Correlation | .339** | 1 |
| | Sig. (2-tailed) | .001 | |
| | N | 93 | 93 |

** . Correlation is significant at the 0.01 level (2-tailed).

In this case Pearson Correlation value is between 0.2 - 0.4 Pearson's r is 0.339. We can interpret that there is a weak, Positive correlation between Awareness and Application variables.

In this case the correlation value is positive. We can interpret that when the Awareness of HR Analytics increases the Application and adoption in the use of HR Analytics also increases.

In this case the Significant Correlation value is less than 0.05. We can interpret that there is a highly statistically significant correlation between Awareness on the use of HR Analytics and the Application and adoption in the use of HR Analytics.

Correlation between Decision making capability and Application of HRA

H2o: There is no relation between Decision making capability and Application of HRA

Table 3

| Descriptive Statistics | | | |
|------------------------|------|----------------|----|
| | Mean | Std. Deviation | N |
| Decision Making | 4.41 | .412 | 93 |
| Application | 4.10 | .567 | 93 |

Table 4

| Correlations | | | |
|--------------------------------------------------------------|---------------------|-----------------|-------------|
| | | Decision Making | Application |
| Decision Making | Pearson Correlation | 1 | .574** |
| | Sig. (2-tailed) | | .000 |
| | N | 93 | 93 |
| Application | Pearson Correlation | .574** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 93 | 93 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

In this case Pearson Correlation value is between 0.4 – 0.6 '1' Pearson's r is 0.574. We can interpret that there is a moderate, Positive correlations between Decision Making and Application variables.

In this case the correlation value is positive. We can interpret that when the Decision Making on inputs from HR Analytics increases the Application and adoption of use HR Analytics also increases.

In this case the Significant Correlation value is less than 0.05. We can interpret that there is a highly statistically significant correlation between Decision Making on inputs from HR Analytics and the Application and adoption of use HR Analytics.

Correlation between Technology and Application of HRA

H3o: There is no relation between Technology and Application of HRA

Table 5

| Descriptive Statistics | | | |
|------------------------|------|----------------|----|
| | Mean | Std. Deviation | N |
| Technology | 3.92 | .543 | 93 |
| Application | 4.10 | .567 | 93 |

Table 6

| Correlations | | | |
|--------------|---------------------|------------|-------------|
| | | Technology | Application |
| Technology | Pearson Correlation | 1 | .441 ** |
| | Sig. (2-tailed) | | .000 |
| | N | 93 | 93 |
| Application | Pearson Correlation | .441 ** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 93 | 93 |

** . Correlation is significant at the 0.01 level (2-tailed).

In this case Pearson Correlation value is between 0.4 – 0.6 Pearson's r is 0.441. We can interpret that there is a moderate, Positive correlation between Technology and Application variables.

In this case the correlation value is positive. We can interpret that when the Technology use in HR Analytics increases the Application and adoption of use HR Analytics also increases.

In this case the Significant Correlation value is less than 0.05. We can interpret that there is a highly statistically significant correlation between Technology use in HR Analytics and the Application and adoption of use HR Analytics.

Correlation between Application of HRA and Representation of HRA outcomes

H4o: There is no relation between Application of HRA and Representation of HRA outcomes

Table 7

| Descriptive Statistics | | | |
|------------------------|------|----------------|----|
| | Mean | Std. Deviation | N |
| Application | 4.10 | .567 | 93 |
| Representation | 3.85 | .671 | 93 |

Table 8

| Correlations | | | |
|----------------|---------------------|-------------|----------------|
| | | Application | Representation |
| Application | Pearson Correlation | 1 | .428 ** |
| | Sig. (2-tailed) | | .000 |
| | N | 93 | 93 |
| Representation | Pearson Correlation | .428 ** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 93 | 93 |

** . Correlation is significant at the 0.01 level (2-tailed).

In this case Pearson Correlation value is between 0.4 – 0.6 Pearson's r is 0.428. We can interpret that there is a moderate, Positive correlation between Application and Representation variables.

In this case the correlation value is positive. We can interpret that when the Application and adoption of

use HR Analytics increases the Representation of findings from HR Analytics also increases. In this case the Significant Correlation value is less than 0.05. We can interpret that there is a highly statistically significant correlation between Application and adoption of use HR Analytics and the Representation of findings from HR Analytics.

FINDINGS:

- It can be interpreted that if the Awareness level on HR Analytics increases the Application areas levels within the HR function also increases.
- It can be interpreted that if the Decision Making levels on HR Analytics increases the Application levels also increases.
- It can be interpreted that if the Application level on HR Analytics increases the Representation levels in HR functions also increases.

SUGGESTIONS:

There is already enough evidence suggesting the adoption and implementation of HR Analytics in organizations. Through this study and presentation it is recommended that organizations should therefore quickly create a business case for initiating the analytics journey with clear goals in mind.

MANAGERIAL IMPLICATIONS:

The study on HR Analytics and its use in help arrive at decision making thereby impact business outcomes, has demonstrated benefits through from adoption, penetration to implementation. However given its nascent stage of adoption or use among the HR professionals this study highlights the beneficiaries of HR Analytics within the HR Functions, this demonstrates the utility beyond the theoretical boundaries.

CONCLUSION:

HR Analytics and its applications are rapidly becoming core competencies that organizations cannot do without. For example, only 38 percent of organizations report they have the in-house skills required to successfully execute WFP, according to i4cp's 2011 WFP survey. Learning can take the initiative to develop HR Analytics and its applications customized to their organization's specific needs and culture.

To improve its return on investment in talent management, an organization needs to fully understand its workforce demographics, costs and issues while continuously analyzing such issues based on future business needs and objectives. Such an analysis can help the organization identify gaps in talent needed for crucial positions and determine the types and numbers of people needed in the workforce and when they will be needed. Research shows that leading organizations integrate workforce analytics and planning with overall strategic planning and review their projections at least twice annually.

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