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4.1 Concept of Research Methodology

Research methodology refers to a systematic way of solving research problem. Essential feature of a good research is its pursuit for reality. It is difficult to reach on reliable and convincing results without good research methodology, as it aspires for the essential knowledge. According to Easter by-smith (1991) before the decisions on research design choices are made; it is wiser to understand “philosophical issues” around the research process. They have outlined three benefits of understanding research process before making any decisions:

- First, the study helps researchers understanding the overviews of research design components and procedures.
- Second, it helps researchers in making the right choices that work well with specific research problems.
- Third, learning can improve confidence and competencies of researchers in the area where they do not have past experience.

Undertaken research study was aimed to ascertain the effect of human resource development practices in service sector of Ujjain and Indore city. This chapter deals with method and procedure of the study, which is presented under the following headings.

4.2 Nature of the study:

The researcher has used the descriptive method in the study of ‘HRD practices in Hospital, Insurance and Telecom. Its descriptive aspects involve analysis, interpretation, measurement and concrete suggestions for solutions to the HRD
problems in the said branches.

4.3 The Sample Size

The researcher contacted 450 employees who have divided equally in three major service sectors are hospital, insurance and telecom. They were appraised about the purpose of the study and request was made to them to fill up the questionnaire with correct and unbiased information. The duly filled in questionnaires were edited by the researcher and in accordance with the requirements of the objectives and hypothesis. In addition to this various statistical tools, graphs, diagrams have also been used to draw inferences.

4.4 Sampling

Sampling is the selection of a part of an aggregate or population to represent the whole population. The part of the population selected is called a sample. Thus, in the sampling techniques instead of every unit of the universe, only a part of the universe is studied and the conclusions are drawn on that basis for the entire universe. There are different methods of sampling which are used for research purpose such as simple random sampling and restricted random sampling. Restricted random sampling includes stratified sampling, systematic sampling and cluster sampling.

The selection of the divisions has been made with the help of stratified random sampling. Under stratified sampling the universe to be sampled is divided into four strata. Which are mutually exclusive and include all items in the universe. The researcher selected the branches on the basis of convenience sampling and respondents on the basis of non probability sampling. Respondents of service sector has been divided in to two regions Ujjain and Indore
and detailed of the service sector and region as given bellow:

<table>
<thead>
<tr>
<th>Service Sector</th>
<th>Region</th>
<th>Ujjain Respondents</th>
<th>Indore Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Telecom</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Total no. of respondents</td>
<td>225</td>
<td>225</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>450</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4

There are three classes of employees (Class I, Class II, and Class III) from the above mentioned sector:

- Class I include AO, AAO, ADM, DM
- Class II include Development Officers,
- Class III include Assistants, Typists, Machine Operators, Stenographer, Telephone Operators and clerks

The present study is based upon 450 respondents representing two different regions and three different service sector which include class III employees.
4.5 The Study

Human Resource Development is a very wide topic to study. It is very difficult to examine each and every aspect of HRD. Hence the scope of study is focused to the nine practices chosen to study the HRD practices in Hospital, Insurance and Telecom of Ujjain and Indore city and find out under these two cities, where the employees get the best HRD practices. The scope of this investigation focuses at study the parameters which aim to find out the best human resources development practices in Hospital, Insurance and Telecom of Ujjain and Indore city. The nine variables of HRD practices are selected for the purpose of the study included the following:

- Recruitment and Selection
- Induction.
- Communication Policies.
- Performance Appraisal.
- Counseling & Feedback.
- Training and Development
- Labor welfare.
- Employee Empowerment.
- Employee Development.

4.6 Tools for Data collection

Every research project has a specific framework for collection and analysis of data in a manner that aims at combining relevance to the purpose of research with economy of scale. After the research problem has been defined and the research design has been chalked out, the task of data collected begins.
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The research work is based on both primary and secondary data. The primary data has been collected by well structured questionnaire, personal observation, interviews, and discussion with staff. Most of the information has been collected by administering a well structured questionnaire based on five point Likert scales, ranging from strongly agree to strongly disagree.

It has been the endeavor of the researcher to frame only such questions which could be easily answered by the respondents. In the questionnaire framed, all the aspects of HRD have been covered. Secondary sources are the main source of data. Secondary data has been collected from various hospitals, telecom and insurance offices through published and unpublished records, manuals, magazines, periodicals etc. Most of the information has been collected and compiled from various issues of annual reports of Insurance, magazines like Yogakshema, manuals, Journals, file records, printed material, and different publications in newspapers like the Economic Times. The Times of India, Hindustan times, etc.
RESEARCH DESIGN OF THE STUDY
The instruments used for the present study are described in detail.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Variable studied</th>
<th>Tools used</th>
<th>Sample</th>
<th>Statistics used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Recruitment and selection</td>
<td>Recruitment and selection questionnaire</td>
<td></td>
<td>Descriptive</td>
</tr>
<tr>
<td>2.</td>
<td>Training and Development</td>
<td>Training effectiveness questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Performance Appraisal</td>
<td>Performance appraisal effectiveness questionnaire</td>
<td>Ujjain and Indore</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Induction</td>
<td>Induction questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Communication Policies System</td>
<td>Communication Policies questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Counseling Feedback &amp; Employees counseling questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Labor welfare</td>
<td>Labor welfare questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Employee Empowerment</td>
<td>Employee Empowerment questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Employee Development</td>
<td>Employee Development questionnaire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.6
4.7 Tools for Data Analysis

Data has been analyzed using statistical package for Social Sciences (SPSS), version 16.0. The data analyzed and interpreted by calculating Mean, Standard Deviation, and Coefficient of Variations to get a better picture of the HRD practices in Hospital, Insurance, and Telecom sector.

4.7.1 Reliability Test

Reliability of the measure was assessed with the use of cronbach’s alpha. The reliability coefficients of the five dimensions of SERVQUAL (Perceptual scale) were consistent with the original version conducted by Parasuraman et al. (1988). Cronbach’s alpha test is designed as a measure of internal consistency that is all the items within the instruments measure the same thing. It allows measuring the reliability of different variables. It consists of estimates of how much variation in scores of different variables is attributable to change or random errors (Selltiz et al. 1976). As a general rule, a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of construct reliability (Nunnally 1978), low value below the 0.5 implies that reliability may not be appropriate.

Even though Cronbach’s coefficient of the scale of the original SERVQUAL had high internal consistency (.92) based on Nunnally’s (1978) analysis, The Cronbach’s coefficient of the total scale here is found to be (0.821). This supports Parasuraman et al.’s (1988) findings that the SERVQUAL instrument could be utilized in various services without adaptation because the SERVQUAL has high reliability and validity. The Cronbach’s alpha for the questionnaire is (0.821) (Table 4.7.1). Hence, the scale used here can be said as reliable and can be used for analysis.
4.7.2 t-test

Researcher used t-test as suggested by (Phillips, 1992) the difference between z and t distributions is negligible beyond the sample size of 120, two are virtually identical (Cooper and Emory, 1995). Furthermore, t-test was performed to analyze difference between values of two independent data sets and response of every case for respective variables. Independent samples t-test was performed to analyze difference between mean values of two data sets concerning respective variables. Value of t was selected based on Levene’s F test for equality of variances.

4.7.3 Analysis of Variance

Analysis of variance (ANOVA) test was performed to analyze difference among the mean values of more than two groups concerning the respective variable. The study was analyzed keeping in view the impact of independent variables gender, age and income) upon the dependent variables and further relationship among the Recruitment & Selection, training & development, performance appraisal, Induction, communication policies, labor welfare, employee empowerment, counseling & feedback, employee development on employee’s productivity was analyzed by using Pearson
correlation coefficient and multiple regressions.

4.7.4 Factor analysis

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. For example, it is possible that variations in four observed variables mainly reflect the variations in two unobserved variables. Factor analysis searches for such joint variations in response to unobserved latent variables. The observed variables are modeled as linear combinations of the potential factors, plus "error" terms. The information gained about the interdependencies between observed variables can be used later to reduce the set of variables in a dataset. Computationally this technique is equivalent to low rank approximation of the matrix of observed variables. Factor analysis originated in psychometrics, and is used in behavioral sciences, social sciences, marketing, product management, operations research, and other applied sciences that deal with large quantities of data.