GENERAL MANAGEMENT

"IMPACT OF ATTRITION ON THE QUALITY OF SOFTWARE PROJECTS"

PROF. S. BALA SUBRAMANIAM

PROFESSOR,

AIMS, PUNE

NEED FOR THE STUDY

One of the biggest challenges faced by the Information Technology companies globally is the increasing rate of employee attrition. There are many causes for attrition including, retirement and death. However, most attrition is due to employee turnover. Staff attrition (or employee turnover) represents significant costs to technology and business process outsourcing (BPO) companies. High attrition rates drive up training costs, and increase human resources, recruiting, and productivity costs. They also increase the prospect of customer service complaints or quality problems, and create substantial continuity problems for longer-lived projects.

REVIEW OF LITERATURE

An attrition rate, also known as a churn rate, can be a measure of two things. It is the measure of how many customers leave over a certain period of time or how many employees leave over a certain period of time. An attrition rate can also be a combination of these two factors.

CHALLENGES BEFORE INDIAN IT INDUSTRY

At present there are a number of challenges that are facing the information technology industry of India. One of the major challenges for the Indian information technology industry was to keep maintaining its excellent performance standards.

HR CHALLENGES IN THE IT INDUSTRY

As the IT industry moves beyond tapping the talent in the best campuses, to recruiting large numbers from second and third rung institutes, the challenge of quality is going to be a major one. Urgent steps are needed to

upgrade the physical and intellectual infrastructure of colleges, and also the syllabi and teaching materials/methods.

While the attrition numbers will not be a serious impediment, the same cannot be said about quality. It is true that some Indian institutions (the IITs and IIMs, in particular) have established an enviable world-wide reputation for turning out top-quality professionals. However, the average engineering graduate is hardly of world-class, and the average non-technical graduate is of distinctly inferior quality.

ATTRITION DUE TO TALENTED FEMALE PROFESSIONALS - REVERSING THE BRAIN DRAIN IN SCIENCE, ENGINEERING, AND TECHNOLOGY

Athena Factor survey data show that 41% of highly qualified scientists, engineers, and technologists on the lower rungs of corporate career ladders are female. To fill the skills gap, companies need to turn to the female talent in their own backyard.

The female drop-out rate is huge. Fully 52% of highly qualified females working for SET companies quit their jobs, driven out by hostile work environments and extreme job pressures.

HIGH ATTRITION RATES IMPACTS QUALITY OF SERVICES TO THEIR END CONSUMERS

The high attrition rate as high as 20-22% was a major drawback since the companies suffered with the quality of services to their end consumers as also the high costs of recruitment and the costs on training and development. With the warm-chair attrition gaining concept, it is still a long way to go before the IT companies stabilize as far as retention of employees is concerned.

OVERVIEW OF INDIAN IT INDUSTRY

Attrition affects the quality of service, leading to greater expenditure on training and development, thereby affecting the overall performance, including improving utilisation rates of the company.

EMPLOYEE TURNOVER - DUTIES, BENEFITS, EXPENSES

High turnover can be a serious obstacle to productivity, quality, and profitability at firms of all sizes. For the smallest of companies, a high turnover rate can mean that simply having enough staff to fulfill daily functions is a challenge, even beyond the issue of how well the work is done when staff is available. Turnover is no less a problem for major companies, which often spend millions of dollars a year on turnover-related costs. For service-oriented professions, such as management consulting or account management, high employee turnover can also lead to customer dissatisfaction and turnover, as clients feel little attachment to a revolving contact. Customers are also likely to experience dips in the quality of service each time their representative changes.

OBJECTIVE

3.1   PRIMARY OBJECTIVE

➢   To identify the attrition rate in IT industry, its causes and measures to control.

➢   To analyze the impact of attrition on the quality of the projects and identify measures to control and retain quality standards amidst attrition.

3.2   SECONDARY OBJECTIVE

➢   To study the impact of attrition on the growth of the organization and identify measures to control the cost incurred.

➢   To identify the additional cost incurred to the organization due to attrition.

METHODOLOGY

DATA COLLECTION

SECONDARY DATA

➢   Response through e-mails

➢   Journals, Magazines

➢   Organization records

➢   Statistics from various sources like media, web, management books etc

Data was collected from secondary sources to understand the problem clearly and focus on the problem faced by various companies in the IT industry.

PRIMARY DATA

➢ Circulation of Questionnaire.

➢ Interview with executives from IT industry.

➢ Data collection by online Survey.

QUANTITATIVE RESEARCH

The quantitative research was conducted using an online survey, this option is chosen as it's cost effective. We would like to select the right population to survey, and thus online survey provides us a great advantage on both cost and sampling.

PURPOSE

The purpose of the quantitative research is to determine the opinion of the sample population on the subject under study and perform further analysis to derive conclusions.

FOCUS GROUP STUDY

A focus group study was conducted on small sample of 5 IT project managers and their inputs have been used to prepare the Questionnaire for further data collection.

POPULATION AND SAMPLING

Sampling is that part of statistical practice concerned with the selection of a subset of individual observations within a population of individuals intended to yield some knowledge about the population of concern, especially for the purposes of making predictions based on statistical inference. Sampling is an important aspect of data collection.Researchers rarely survey the entire population for two reasons (Adèr, Mellenbergh, & Hand, 2008): the **cost is too high,** and the **population is dynamic** in that the individuals making up the population may change over time.

The three main advantages of sampling are that the cost is lower, data collection is faster, and since the data set is smaller it is possible to ensure homogeneity and to improve the accuracy and quality of the data.

A sample of 30 respondents was chosen to represent the entire population. IT project managers who would have a greater visibility to the IT project delivery from various companies are chosen to be the sample.

The sample includes a mix of both genders and from various geographies.

IT Project Managers	Type	Gender	Sample Size
		Male	
	Focus Group	Female	5
		Male	
	Online Survey	Female	30

PRE-TESTING

Once the questionnaire was developed in order to ensure the questionnaire was clear and understandable, the questionnaire was evaluated by the supervisor of our research. The suggestions made by the expert was taken in to consideration and the questionnaire was further modified to make it, focused, crystal clear, short and easy to understand. Further, a small group of respondents were asked to take the survey to ensure that the scales were clear and that respondents were able to comprehend the information.

ON-LINE SURVEY

MANAGEMENT STUDY

Impact of attrition on the quality of the project delivered.

Using on –line questionnaire.

SAMPLING TECHNIQUES

The survey was conducted online, thus an online survey based on invitation was conducted. In order to get high response, **snow ball method** was used. Thus, the links of the survey was forward to project manager in IT industry. Thus, the response rate was fairly high for the survey. Some other methods of publishing the URL on social networking sites, like face book and LinkedIn were used; this helped us increase the response rate.
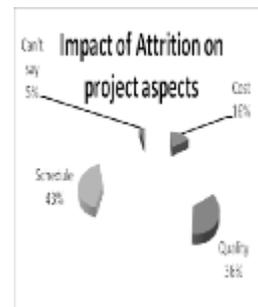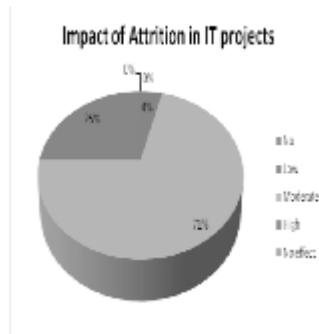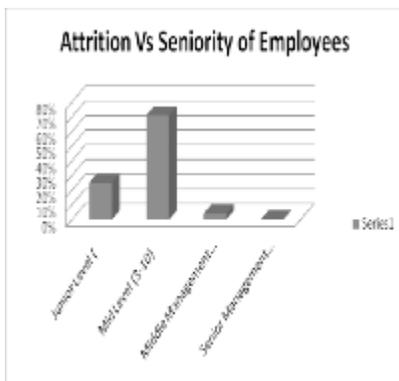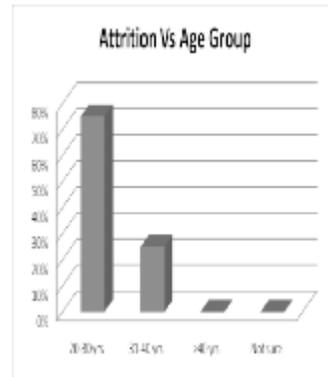
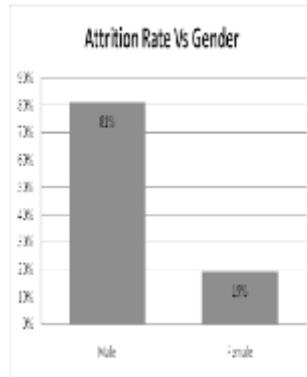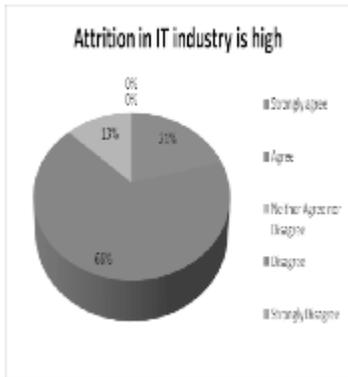## SURVEY RESPONSE

The response received from 30 respondents is attached in excel format

Microsoft Office
Excel 9¤-2003 Worksh

DATA PRESENTATION

TECHNIQUES FOR DATA ANALYSIS

➢   Data collected will be analyzed using various statistical methods to derive at conclusions.

For practical reasons, a chosen subset of the population called a sample is studied — as opposed to compiling data about the entire group (an operation called census). Once a sample that is representative of the population is determined, data is collected for the sample members in an observational or experimental setting. This data can then be subjected to statistical analysis.

Interpretation of statistical information can often involve the development of a null hypothesis in that the assumption is that whatever is proposed as a cause has no effect on the variable being measured.

Most studies will only sample part of a population and then the result is used to interpret the null hypothesis in the context of the whole population. Any estimates obtained from the sample only approximate the population value. Confidence intervals allow statisticians to express how closely the sample estimate matches the true value in the whole population. Often they are expressed as 95% confidence intervals. Formally, a 95% confidence interval of a procedure is a range where, if the sampling and analysis were repeated under the same conditions, the interval would include the true (population) value 95% of the time. This does not imply that the probability that the true value is in the confidence interval is 95%.

WORK DONE SO FAR

- Prepared the questionnaire to be circulated for data collection.

- Identified contacts in various IT companies for the data collection.

- Conducted interviews with the identified focus groups.

- Circulated the questionnaire and collected response from the identified sample.

- High level analysis of the data has been carried out.

WORK TO BE DONE

- Perform statistical data analysis.

- Identify trends and conclusions.

- Prepare the final project report.

LIMITATIONS

- The study is specific to IT industry only.

EXPECTED DELIVERABLES

- To improve the quality of projects amidst attrition.

- To reduce the cost incurred to the organization due to attrition rate.

REFERENCES

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