CHAPTER 4

RESEARCH METHODOLOGY

4.1 Methodology

A 2 X 2 X 2 between subjects factorial design is proposed to validate the research propositions. Experimental designs have been found to be extremely useful in causal research, where such designs are used to test how one particular manipulation in an independent variable affects the variation in a dependent variable (Montgomery et al. 2003). If the objective is to investigate interaction between independent variables with varying levels of manipulation, then factorial designs can be implemented (Montgomery et al. 2003).

<table>
<thead>
<tr>
<th>SOURCE OF TESTIMONIAL</th>
<th>TREATMENT VARIABLES</th>
<th>TYPE OF EMPLOYEE TESTIMONIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company dependent</td>
<td>Text Based</td>
<td>Positive</td>
</tr>
<tr>
<td>Company neutral</td>
<td>Audiovisual</td>
<td>Realistic</td>
</tr>
<tr>
<td>Text Based</td>
<td>Treatment 1</td>
<td>Treatment 2</td>
</tr>
<tr>
<td>Audiovisual</td>
<td>Treatment 3</td>
<td>Treatment 4</td>
</tr>
<tr>
<td>Text Based</td>
<td>Treatment 5</td>
<td>Treatment 6</td>
</tr>
<tr>
<td>Audio-visual</td>
<td>Treatment 7</td>
<td>Treatment 8</td>
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</tbody>
</table>

Figure 10: 2 x 2 x 2 Factorial Designs
In a factorial design, each independent variable is manipulated across different levels (male/female, high income/ low income, match/ mismatch etc.). The independent variables of interest in this study are the content of employee testimonial (positive vs. realistic), source of advertisement (company dependent vs. company independent) and delivery mode of organizational preview (text vs. audio-video). Perceived message credibility, perceived web quality, perceived organizational attractiveness and applicant’s intention to apply for the job have been chosen as dependent variables of interest. Confounding factors in this study are organization familiarity, questionnaire structure, job search stage, duration of internet job search, and demographic factors age, gender, educational qualification and specialization.

4.2 Source of Data on Internet Users in India

There was a need to have some understanding about the distribution of online job-seekers across India in order to identify the regions which had the highest density of online job-seekers. For this, several secondary data sources have been identified to get a picture of India’s online users. At present there are approximately 120 million internet users in India (Internet world stats 2012) which makes it the third highest base of internet users in the world. Out of these 120 million users, over 65 million are active internet users, that is who use internet frequently, as per India Online Landscape Survey (2012) conducted by Juxt Consultants. Out of these 65 million, 46 million active users reside in cities while 16 million are based in rural areas. The India Online Landscape survey is a annual survey report prepared by a private consultancy firm Juxt Consultants (www.juxtconsultants.com) conducted among 201,839 individuals spread across four regions (north-south-east-west) of India between April-Mid June 2011 (covering 32,876 households in 104 cities and 15,889
households in 766 villages). Therefore, the active job-seeker population in India can be considered to be approximately 30 million.

Then again, as per the India Online Landscape Survey 2012 (www.Juxt.com), active job seekers from urban India account for 97% of the E-recruitment universe in India (passive job seekers account for only 3% of online recruitment website users). The 5 Indian Metros (Delhi, Mumbai, Kolkata, Chennai and Bangalore) account for 48% of the job seekers, while Hyderabad and Pune have more job seekers than Chennai. 23% of job seekers are women, and as many as 88% job seekers are in age group 20-35. 30% are very fresh and another 30% at junior management level. Major industries include information technology (IT), banking and financial services, engineering and manufacturing, telecom, education, training and healthcare. Predominant educational qualification has been observed to be engineers and MBAs.

Other secondary data sources have been consulted to validate the findings of the India Online Landscape Survey. For example, as per the ‘I-Cube Survey 2012’ report by Internet and Mobile Association of India (IAMAI) in collaboration with Indian Market Research Bureau (IMRB), the number of users who have registered and uploaded resumes in various job sites is close to 22.6 million as of 2013 (www.iamai.in). An earlier report titled ‘Internet in India’ by IMRB-IAMAI (2007) has listed recruitment related advertisement as the most viewed category of online advertisement with 41% of the then active internet population searching for jobs online. The trend has grown rapidly in the last six years (Tyagi 2012). Another study, the 2013 Global Management Education Graduate Survey (2013) conducted by Graduate Management Admissions Council (GMAC), has identified online job search as the second most preferred channel for job search among Indian job-seekers accounting for 73% of the recruitment and selection for all graduates of 2013 batch.
4.3 Population of Interest

The target population for this dissertation has been identified as active job-seekers. Kuhn and Skuterud (2000) define active job-seekers as those individuals who have outlined seven criteria for job-seekers to be considered active. The criteria for defining Active Job Seekers as per the guidelines of Kuhn and Skuterud (2000) are as follows:

- Contacted private employment agency
- Contacted friends or relatives
- Contacted school employment center
- Sent résumés/filled applications
- Checked union/professional registers
- Placed or answered ads
- Used other active search methods (Internet job boards)

To be classified as an “active” jobseeker, the individual must report using at least one of these seven traditional search methods. The above criteria can be modified into the following keeping in mind the online environment of the study:

- Sent resume to online job portals
- Fill up online job application forms
- Applied to jobs advertised through internet job boards
- Registered for online job alerts
- Replied to email invitations to apply for jobs
- Visit corporate career pages to search for current openings
- Maintain virtual profiles in professional networking websites

This study wishes to understand how web based attraction measures can enhance perception of job-seekers regarding a prospective employer. As such, passive job
seekers are not considered suitable for this study since such job-seekers are in high demand for organizations and they have enough experience and knowledge to decide whether the firm is a suitable carrier option for them or not, irrespective of any advertisement from the firm (Kuhn and Skuterud 2000; Cober et al. 2004). Hence passive job-seekers have not been considered as a part of the study population.

Since majority of the job-seekers till 2012 are from urban India, the population for the study has been narrowed down to active job-seekers from urban regions of India. The fact that the rural online job-seekers have limited exposure to new technical developments such as streaming videos, blog chatting and social networking, supports the decision to not include rural job-seekers for this thesis, since the comprehension capacity required to acknowledge the technical modifications made in the treatment websites may be lacking for such job-seekers. The India Online Landscape Survey 2012 report also points out that out of the 46 million urban job-seekers in India, 71% reside in the metro cities only. Other significant demographic information include the facts that nearly 77% of these job-seekers are male and over 88% are in the age group of 20-35 years. The most dominant educational qualifications that have been observed are engineering graduates (43%) and post-graduates in business administration (37%).

In terms of experience, 30% of registered urban Indian job-seekers have no prior job experience mentioned in their profiles, while another 30% have work experience in the range of 0-1 years. Another 20% registered users report having work experience in the range of 1-2 years. As per Cober et al. (2004), passive job-seekers are those who have significant work experience and are usually those who are eligible for top managerial positions. Hence those job-seekers, who have less than 2 years of experience, who are in the age group of 20-30 years and who apply frequently for job
vacancies through online channels may be considered to fit the criteria for active job-seekers as per Kuhn and Skuterud (2000). Now that the study population has been restricted to urban Indian active job-seekers, there is a need to distinguish job-seekers without any prior job-experience and those with at least a year or two of experience since the priority and expectations of these two different segments of job-seekers can be significantly different (Ford and Kraiger 1995). Therefore, the experimental unit for this study is any individual who uses E-recruitment in search for job-related opportunities. This study has used random assignment of members to respective groups and allocation concealment technique (Trochim 2004). Two separate segments of job seekers will be studied- entry level Job seekers (0-6 month experience) and active job seekers with 1-2 years experience (more than half of total job seekers). Since there are eight treatment conditions in the factorial design, therefore, the minimum sample size required to run an effective 2x2x2 full factorial design with power 80 % and effect size (d) of 1 is (8*34)= minimum 272 respondents (Ref: Cohen’s power table, Cohen 1988, p. 55). In study 1, 457 post-graduate and graduate students participated in the experiment and in the second study 361 working professionals took part in the exercise. Hence the sample size attained for both study 1 and 2 can be considered robust enough to conduct valid and statistically significant results. As for the SEM analysis, in both study 1 and study 2, the number of respondents is larger than the critical sample size of 200 (Garver and Mentzer 1999). Although researchers have cautioned against use of student sample in social science research (Shuptrine 1975; Höst et al. 2000), in case of study 1, students were actual representatives of active job-seeker population, and hence the choice of students as sample for study 1 should not violate any validity issues (Höst et al. 2000).
4.4 Design of Questionnaire

A survey questionnaire based on 5 point Likert-type scale has been used to collect data on the variables of interest for this study. The scale items have been derived from existing valid psychometric instruments which have been repeatedly used by past researchers in related study contexts. Prior to conduction of the actual study elements, a pilot study has been conducted with 36 final year MBA students in a University in Dehradun, North India to test the reliability of the scales used in this dissertation. The scale reliabilities were observed to be above .70 in all the cases, thus giving evidence of good reliability of the indices. Perceived credibility has been measured using a scale to measure perception of credibility of online information developed by Johnson and Kaye (2004). This is a 4 item Likert type scale with feedback option ranging from 1 = not at all believable and 5 = very much believable. Example of a scale item is ‘how believable did you find the information presented in the Join Us section?’

Table 2: Key Constructs and Scale Reliabilities

<table>
<thead>
<tr>
<th>Name of Construct</th>
<th>Scale Description</th>
<th>Developed by</th>
<th>Scale Reliability</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pilot Study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=36</td>
</tr>
<tr>
<td>Perceived Credibility</td>
<td>4 Item 5 point Scale</td>
<td>Johnson &amp; Kayes</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2004)</td>
<td></td>
</tr>
<tr>
<td>Perceived Quality</td>
<td>8 item 5 point scale</td>
<td>Barnes &amp; Vidgen’s Webqual 3.0 (2001)</td>
<td>.93</td>
</tr>
<tr>
<td>Organizational Attractiveness</td>
<td>4 item 5 point scale</td>
<td>Highhouse, Lievens &amp; Sinar (2003)</td>
<td>.92</td>
</tr>
<tr>
<td>Intention to apply</td>
<td>3 Item 5 point Scale</td>
<td>Van Birgelen, Wetzels &amp; Van Dolen (2008)</td>
<td>.89</td>
</tr>
</tbody>
</table>
Perceived web quality is measured using the perceived design quality subscale of WEBQUAL 3.0 developed by Barnes and Vidgen (2001). This subscale measures generic perception regarding the design and layout of a website. It is an eight item five point Likert type scale with 1 = strongly disagree and 5 = strongly agree. Organizational attractiveness is measured using the 4 item 5 point Likert scale created by Highhouse et al. (2003) and applicant willingness to apply for job is measured using a 3 item 5 point scale developed by Van Birgelen and Wetzels (2008). Confounding variables such as age, gender, education level, and work experience have been controlled in the experiments.

4.5 Treatment Creation

A free online website creation tool offered by the online website design agency ‘Webs.com’ has been used to create the website of a fictitious firm ‘Eco-tech Concepts and Solutions’ (henceforth referred to as ECS). The website is designed keeping in mind the studies on website content by Koong and colleagues (2002), Cober et al. (2004), Young and Foot (2005) and Tong and Sivanand (2005).

As discussed in preceding sections, a content analysis of the top hundred best places to work in India has been conducted to validate the presence of such tools in the corporate websites of the firms listed in the Best Place to Work Survey (2013). Based on these findings, the prototype website was designed. Inspiration for the website design came also from review of firms operating in real world in similar types of industries as the fictitious firm; in this case environment friendly technological solutions. Images, videos and content used in the website have all been generated through personal sources and any resemblance to any character living or dead is merely coincidental. Five separate web pages have been created for ECS, namely- *Homepage, About Us, Services, Join Us and Contact Us*. The ‘Homepage’ describes
the firm as an eco-friendly technological solution provider through procurement of used non-biodegradable scrap materials, manufacturing of reengineered products through recycling and supply-chain management of recycled wastes. The ‘Services’ page lists three key verticals of the firm- recycling, re-engineering and supply chain. The ‘Contact us’ page indicates the location of the head quarters of the firm and has provision for customer query.

The manipulations have been made in the ‘Join us’ page of the ECS website through incorporation of either positive/ realistic testimonials (refer to Appendix I and II) and presence of testimonial within the website or via an external blog created separately and linked to ECS website (refer to Appendix III and IV). This blog has been named ‘Inside office’. ‘Inside office’ has been described as a third party interactive forum for unbiased discussion about firms by their previous and current employees where anybody can view every comment posted by employees about a particular organization. Another manipulation has been made in the ‘About us’ page, with two different modes of corporate preview- one text based and another audio-visual (refer to Appendix V). The audio-visual profile of ECS was created using ‘Windows Moviemaker’ software by using clippings from various videos available in the online video sharing website Youtube in order to maintain a realistic view of a firm and at the same time making it difficult for the respondents to identify any particular company in particular from the video. As for the employee testimonials, in one version, two employees, one male and one female narrated their experience about the firm in positive light in written form. In the other version the same pair of employees talked about the pros as well as cons of working in the firm. Opinions from three external experts on web development was sought to verify the appropriateness of the final design of the website.