CHAPTER 6

QUESTIONNAIRE DEVELOPMENT AND TESTING
6.1 Pilot Test

To fulfill the dual research objectives of providing a comprehensive Word of Mouth Output Scale and establishing a relationship between the drivers and effects of Word of Mouth two separate questionnaires were developed. The first questionnaire was to elicit factors which could be used to measure Word of Mouth output and this has been discussed in the previous chapter on scale development, chapter five. Post the development of the scale the second questionnaire was developed to get consumer responses on both drivers and outcomes of Word of Mouth related to a specific Word of Mouth message received by them in the recently.

Established procedure was followed for questionnaire development. The research objectives were kept in mind and a flow of questions was designed. The scales were used from literature review and scale development. A seven-point likert scale, which is easy to follow and widely used in Marker Research, (Malhotra and Dash, 2010) was used. Where ever scale was picked from literature, the prescribed scaling technique was used. Expert validation was done by having experts from industry, academia and peer group review the content and format of the questionnaire. The questionnaire thus developed was purified in a pilot test conducted.

The details of the pilot test conducted for questionnaire two are discussed next.

6.2. Purpose

Pilot Study is the small scale study of a full research. Typically, they are a small scale version, for trial run, a preparation for the major study. It is also called ‘feasibility’ studies conducted the purpose of fine tuning the instrument of research, in this case the questionnaire, (Baker 1994). Pilot studies provide valuable insights for the researcher in terms of complexity of the instrument, missing items/variables, collection techniques, time...
span needed, statistical tools that could be used, and so on. Pilot studies are therefore an important element of a good study design. Conducting a pilot study increases the likelihood of a successful data collection for the main study. As per De Vaus (1993) "Do not take the risk. Pilot test first."

6.3 Methodology

Steps for Pilot Test

Following is the Pilot Study procedure to improve the internal validity of a questionnaire, given by Peat et al. 2002:

- Administer the questionnaire to pilot subjects in exactly the same way as it will be administered in the main study
- Ask the subjects for feedback to identify ambiguities and difficult questions
- Record the time taken to complete the questionnaire and decide whether it is reasonable
- Discard all unnecessary, difficult or ambiguous questions
- Assess whether each question gives an adequate range of responses
- Establish that replies can be interpreted in terms of the information that is required
- Check that all questions are answered
- Re-word or re-scale any questions that are not answered as expected
- Shorten, revise and, if possible, pilot again.

(Source: Table 3.23 in Peat et al. 2002: 123)

These steps were closely followed.
Data Collection Process

Primary Data was collected through direct one to one communication, in person. Online channels were not used to ensure immediate response and quelling of doubts that the respondent might have had. The sampling technique was Deliberate Sampling or Convenience Sampling. There was a purposive selection of candidates from the universe under study based on ease of access and judgment.

The data was collected from 100 respondents

Research Tools Used

1. Using Graphs and Charts for characterizing the population
2. Frequency distribution where ever necessary
3. The normality of variables was tested using skewness, kurtosis and their respective z values
4. Reliability of scales were tested in context of the current study
5. Variance covariance matrix was studied

6.4 Results

Data was tested for normality. Scales picked from literature review were tested for reliability. These scales were

- **Strength of Ties with the Source**, (Carl, 2008; Granovetter, 1973);
- **Perceived Source Credibility** (Carl, 2008);
- **Message Content or Richness of Content** (Sweeney, 2010);
- **Message Delivery or Strength of Delivery** (Sweeney, 2010);
- **Social orientation and Community membership**, (Hennig-Thurau and Walsh, 2003-4); and
- **Product category Involvement**, (STII scale by McQuarrie and Munson, 1991 (Bearden and Netemeyer, 1993).
Normality Tests

Normality of data is one of the key requirements for running a number of statistical tests. Following steps were taken to check normality

- Shapiro-Wilk Test has been performed to check whether the data is normally distributed. Shapiro-Wilk test is considered reliable for small and medium size data.
- Skewness (measure of symmetry) and Kurtosis (measure of peakedness) of the distribution have also been performed
- The Z value of Skewness and Kurtosis has also been calculated
- The p value or (sig in SPSS output) should be above 0.05 for a normal distribution
- The Z value should be within absolute value of 1.96 at 95% significance. In this case the data will be slightly skewed and kurtotic but will not differ significantly from normality
- According to West et al, in “SEM with non-normal Variables” there will be a departure from normality is absolute skew value is more than 2.1

Data distribution was not found to be normal. Non-normal data can occur because of the scaling of variables (ordinal rather than interval) and/or the limited sampling of subjects. Therefore, selection of statistical tools to analyse data had to keep this in mind.

Reliability

Reliability testing was done to check the reliability of existing scales in the context of the current research. Cronbach’s Alpha is the most common measure of internal consistency or reliability. It is commonly used when we have multiple Likert questions that form a scale. The Rule of George and Mallory, 2003 was used to check for reliability.
Rule of George and Mallery, 2003, for alpha coefficient or reliability coefficient

1. More than 0.9 is Excellent
2. More than 0.8 is Good
3. More than 0.7 is Acceptable
4. More than 0.6 is Questionable
5. More than 0.5 is Poor
6. Less than 0.5 is Unacceptable

Thus, closer the coefficient to 1, the better

Table 12 highlights the reliability test

Table 12: Reliability Tests

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Variable</th>
<th>Alpha Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strength of Ties with Source</td>
<td>0.823</td>
</tr>
<tr>
<td>2</td>
<td>Message Content</td>
<td>0.659</td>
</tr>
<tr>
<td>3</td>
<td>Message Delivery</td>
<td>0.819</td>
</tr>
<tr>
<td>4</td>
<td>Community Membership</td>
<td>0.799</td>
</tr>
<tr>
<td>5</td>
<td>Social Orientation</td>
<td>0.708</td>
</tr>
<tr>
<td>6</td>
<td>Product Category Involvement</td>
<td>0.871</td>
</tr>
</tbody>
</table>
The reliability of Message content was questionable; a Cronbach’s alpha if items were deleted was conducted. If question 11 was deleted, the scale can reach near acceptable reliability (Table 13).

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Msg Q 1</td>
<td>13.450</td>
<td>35.523</td>
<td>.279</td>
<td>.373</td>
<td>.642</td>
</tr>
<tr>
<td>Msg Q 2</td>
<td>13.690</td>
<td>33.044</td>
<td>.369</td>
<td>.472</td>
<td>.625</td>
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<td>Msg Q 3</td>
<td>13.320</td>
<td>35.715</td>
<td>.408</td>
<td>.410</td>
<td>.627</td>
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<tr>
<td>Msg Q 4</td>
<td>13.420</td>
<td>36.226</td>
<td>.350</td>
<td>.360</td>
<td>.634</td>
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<tr>
<td>Msg Q 5</td>
<td>14.080</td>
<td>33.792</td>
<td>.313</td>
<td>.353</td>
<td>.636</td>
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<tr>
<td>Msg Q 6</td>
<td>13.910</td>
<td>33.658</td>
<td>.308</td>
<td>.327</td>
<td>.638</td>
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<tr>
<td>Msg Q 7</td>
<td>14.340</td>
<td>30.388</td>
<td>.510</td>
<td>.437</td>
<td>.592</td>
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<td>Msg Q 8</td>
<td>13.960</td>
<td>32.503</td>
<td>.379</td>
<td>.313</td>
<td>.622</td>
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<td>Msg Q 9</td>
<td>13.330</td>
<td>36.587</td>
<td>.288</td>
<td>.351</td>
<td>.642</td>
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<td>Msg Q 10</td>
<td>13.450</td>
<td>35.826</td>
<td>.282</td>
<td>.357</td>
<td>.642</td>
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<td>Msg Q 11</td>
<td>13.450</td>
<td>38.472</td>
<td>.019</td>
<td>.260</td>
<td>.693</td>
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</tbody>
</table>

This was taken into account while administering the final questionnaire.