

A DIGITAL APPROACH: A TREND ANALYSIS IN DATA COLLECTION AND CHALLENGES IN ITO INDUSTRY

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Abstract

Research outcome and its quality are based on various parameters. Data is one of the important deciding factors for the quality of the research. Data collection is an important stage in every research; it could be primary or secondary data collection. So, it is critical for the researcher to have different tools, techniques, approaches and strategies in order to succeed in the process of data collection as per the research plan. This paper aims to explain the various approaches, techniques, challenges and few notable factors during our data collection process in our formal research titled as "An analysis and effective implementation of matrix organization in IT Outsourcing industry". Obviously, the challenges are part of the research however it is important for the researcher to understand the complexity, focus on people, changing the strategy to contact respondents, find the alternate solution and move forward with the research project. All these continuous and focused efforts result in getting a good response from the people which plays a vital role in the research. Also, in this paper, we will discuss few patterns which we have observed during data collection process and which are related to people, society, psychological and organizational behavior.

Keywords: Respondents, Strategy, Approach, Organization, observations, Matrix organization, Data collection

INTRODUCTION

Data collection is the scientific and efficient method of collecting and evaluating information from diverse sources in order to get a comprehensive and precise picture of an area of research. Data collection facilitates a researcher or research organization to answer the related questions, gauge results and makes forecasts about forthcoming possibilities and patterns. Precise data collection is necessary in order to maintain the integrity of the research, make decisions and guarantee the quality of the research. For example, in a server movement or consolidation project, data collection is not just a list of all in-scope servers, but also other related information such as business owner, end user community, the application installed, any dependency on physical components for application to run properly.

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The data collection is an unavoidable component of research which is common to all fields of the study including technology, science, social science, management, and humanities. While methods vary by subject, the importance of ensuring correct and truthful collection remains common for the entire research community. The role and objective for all data collection are to obtain quality information, convert it to rich data analysis and that allows the researcher in convincing and providing a reliable answer to questions that is related to his or her research. The formal data collection method is mandatory as it warrants that, the data collected are defined, perfect and the subsequent decisions based on arguments exemplified in the conclusions are valid and that can be trusted by the research community and the society.

GO GREEN QUESTIONNAIRE

For our data collection process, we have prepared a questionnaire by using google forms. The question bank contains two sets of questions. One is quantitatively based in which users will be able to select the answers from the given list and another is qualitatively based in which users will be able to give input based on their experience from the industry. The google form link will be shared with the users through online tools such as Facebook, email and LinkedIn message. The link could be obtained in 2 ways. One is the traditional link and another one is the short link to the form so that we can ensure at least one of the links help users in accessing the form without any issues.

ELECTRONICALLY COLLECTING THE DATA

The specialty of this data collection process is a paper-free approach. As we are in the IT world and also experienced in IT industry, we are more interested in using the tools and techniques that are available within Information technology. This strategy enables us in avoiding printouts for a questionnaire, postal covers, courier or postal charges, transit time, uncertain delivery, delayed response, waiting for the period for receiving the response, telephone follow-up, physical access to respondents location and getting an appointment with the respondents. As an attempt, we have tried to use the social media such as LinkedIn and Facebook in order to collect the data. The communication to the respondents takes place through Facebook chat, LinkedIn chat, and email. The responses can be stored in google form without any manual effort and that can be downloaded at any point of time in order to analyze them. Also, the follow-up can be done through various electronic means. The cost of research, time and efforts can be drastically reduced by the above methodology and hence it is called as “Go Green” approach.



Source: <http://www.goglobalworx.com/solutions/survey-data-collection/>

RESPONDENTS

We had the variety of participants globally from IT outsourcing industry such as professionals, managers, project management professionals, practitioners and leadership professionals. We have almost covered all levels of employees, i.e from fresher to CEO of the company in order to get different views from each category. We had respondents from five continents such as Asia, Australia, Europe, North America and South America. We have covered more than 15 countries. Respondents are from 21 top performing IT outsourcing companies. In order to get 384 responses as our final sample size, we started our study with around 1.2 million employees as a population in total and then narrowed down to 9000 to reach our maximum required responses.

APPROACHES

The data collection process is not the one-time effort, it needs to be carefully evaluated and continued until we get the expected information from the respondents which are the base to study; analyse, interpret and conclude the research. Also, we had initial plans on reaching respondents and approach them to collect the data. But when we realized that the initial plan may not be effective to get the 384 responses, and then we had to change our strategy in reaching people, requesting to take a look, interacting and obtaining details from the people.

Attempt-1 (Facebook and email)

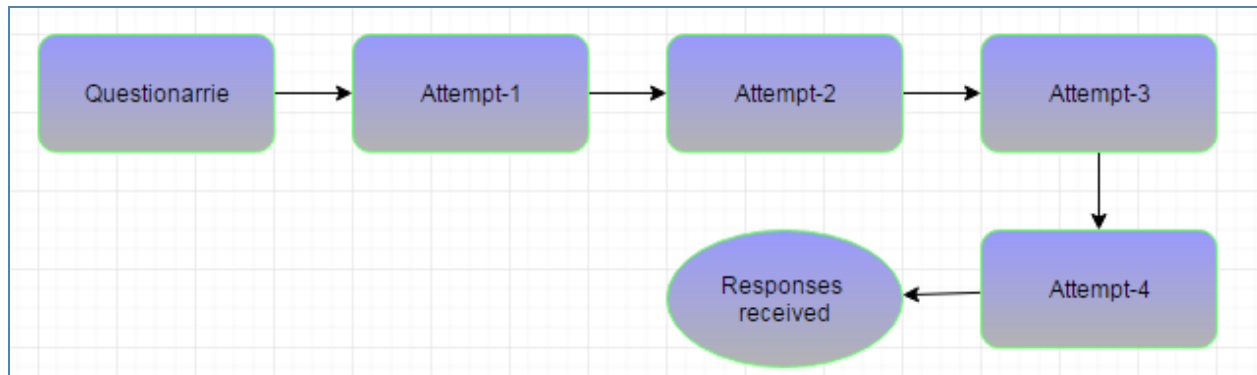
Initially, we approached around 150 respondents from ITO industry and those who were all connected in Facebook via FB chat mechanism. Most of them responded that they were going to fill the survey. However, we received very few responses. Simultaneously we sent an email to the respondents (LinkedIn contacts) through Gmail account. The email included a brief introduction, the brief note about our research topic, the importance of collecting data, how their response is going to impact our research and the link to submit the survey. Since there was a restriction in sending emails from email service provider, we were able to send only 500 emails per day. So we took around 18-20 days to complete sending emails to all the identified respondents. After sending emails, we received a positive statement from people that they were going to respond. Few of them asked various questions such as the reason for sending the questionnaire to them, how we got their contact information, also asked to brief about the research in detailed and we answered all the queries accordingly and appropriately. We were doing this practice as an interactive exercise and after 45 days' time, we received around 50 responses out of 9000 respondents.

Attempt-2 (Facebook and email)

Since the number of responses received was low (50) even after 45 days, so we thought of sending a gentle reminder by forwarding the previous email. But this time we changed the contents of the email by adding a polite request and asking them to take a look and spend some time on the survey request. It helped to some extent but not up to the expectation. We received 60 more responses, so in total, we received around 110 responses after spending 100 days on this data collection project. The response ratio is only one-fourth (25 %) of our expectation.

Attempt-3 (LinkedIn message)

Due to the low number of survey responses received from our past attempts after 100 days' period, we were forced to think and do something different to get more responses. We felt that the respondents might have thought that the request they received is a generic one and there is no individual request made against each of them. So we decided to contact every individual by using a LinkedIn chat (Message) mechanism which enabled us to interact with them personally, introduce ourselves and share the requirement with them. This could be practically possible with the accepted contacts and hence we thought this should be the feasible (Also possible) way of contacting them. However, this could not be done in a single attempt as we needed to contact every individual separately. Though this was a time-consuming task as we needed to put some decent effort in reaching them such as find the right name, go to their LinkedIn page, send introduction message and request them to take the survey. As expected this approach helped in getting good responses. We realized that the trust level among the respondents should have been improved by doing this approach, because they were able to see the LinkedIn details of the researcher such as education, experience, company, position, social status etc. so when we were able to collect all the information about the research transparently, obviously that triggered a connection between the requestor and the respondents. After three months' period, we were able to collect 275 responses.

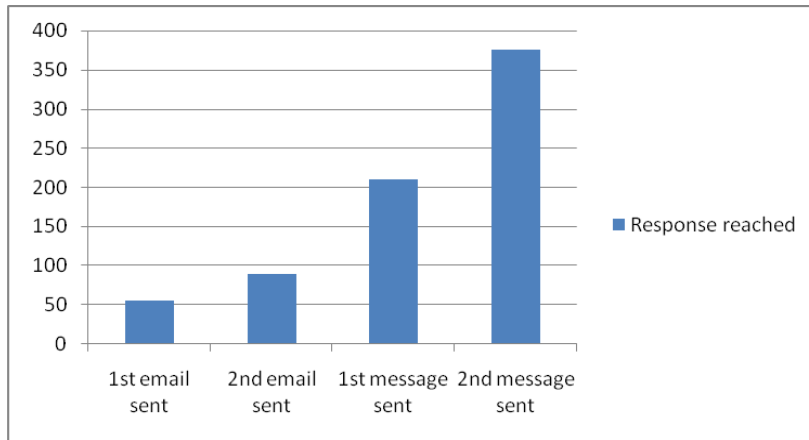


Attempt-4 (LinkedIn Message)

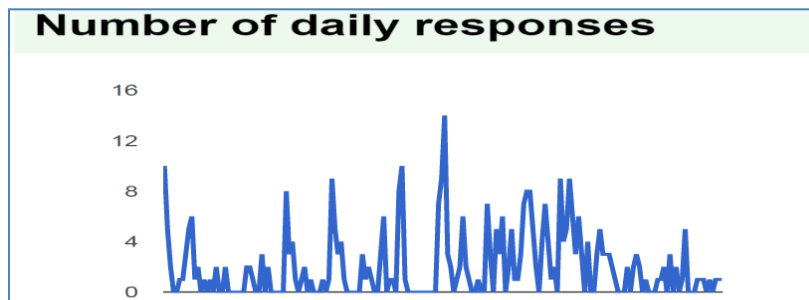
After 150 days' period, we got 275 responses which were around three-fourth(75%) of our requirement, whereas our required number was 380-400. So we were in the situation like should we approach the people once again or not. We questioned ourselves whether it makes sense, as we had approached them three times already. It might not be comfortable for the respondents if we request once again. However, that is the only option left to us, if at all we need to reach the required number. We decided to proceed in approaching them once again but with some changes in the message contents. We mentioned the importance of our study, the deadline for our survey and also requested them if they could help in filling the survey, we would be able to complete the research with all our expectations as planned. After seven months' period, we were able to collect 385 responses which were very close to our requirement.

TREND ANALYSIS OF THE DATA COLLECTION:

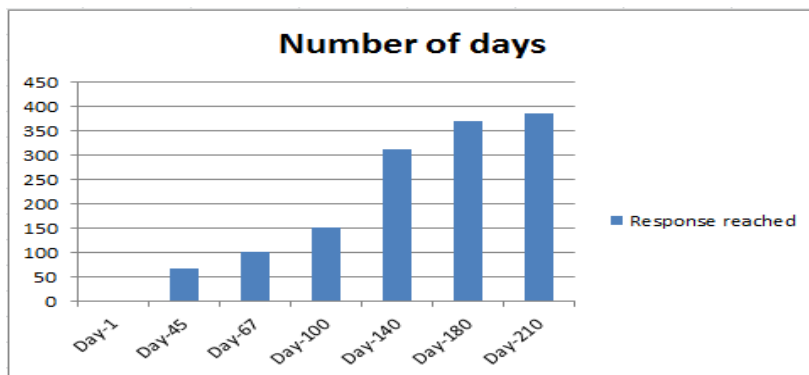
The chart below indicates the various attempts we made with the respondents and the number of responses received for each effort.



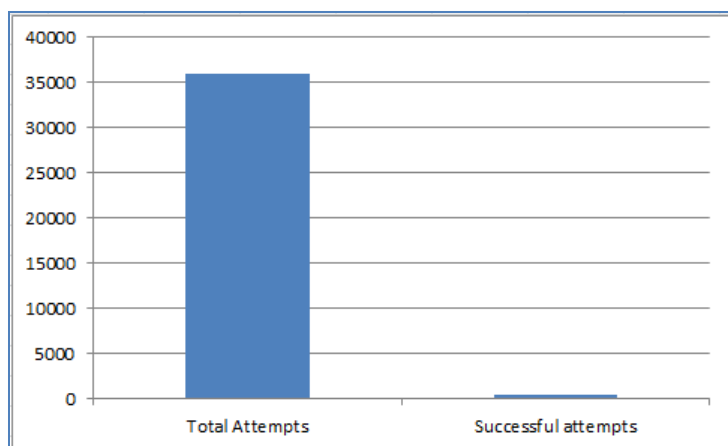
Below diagram shows the trend of daily responses we received, from the day one till the last date of data collection.



The diagram below shows the statistical information such as the number of days and the response rate from day one till the last date of data collection.



The diagram below indicates the number of total attempts that we made against the total respondents and how many were successful. Our total respondents were 9000 and we made 4 attempts with each respondent in order to get one response. So the number of total attempts were 36000 (9000 people * 4 attempts) and the number of response received were 385 which was our research requirement.



IMPORTANT OBSERVATIONS

1. Many of the respondents at senior level responded quickly and confirmed
2. Few of the respondents filled the survey but they did not send any communication, so it indicates they did not want to leave any identity of them.
3. One of the respondents at leadership level sent an email and asked to call him, in order to discuss to understand more about this research and verify the researcher's authenticity before he sends the response.
4. One of the National Directors from my own organization asked me to send an email to him from my official email ID and asked to fix up a meeting to discuss further to understand the requirement from him.
5. We saw a pattern of many leadership professionals and senior management professionals responded, wished, commented on the research stating the topic is interesting for them.
6. Few of the highly experienced professionals have mentioned that the topic is contemporary, interesting and they requested to share the end result with them for reference.
7. Many of the people who studied in premier institutes like IIM, IIT, and NIT have responded and given some insight from their experience and shared few suggestions.
8. Few of the leadership professionals have said that they liked the topic and they would like to help with the survey but could not help due to the non-disclosure agreement what they had signed with their organization.
9. Another interesting fact is that the people who responded, questioned back and/or answered the questionnaire are male.
10. We got confirmation from less than 15 female respondents which included some leadership professional. We believe this could be due to that they did not want to reveal their personal identity to avoid any ethical issues.
11. Also, we saw a pattern of very low response from some of the Europe based companies though we sent multiple communications.
12. Few of the leadership professionals responded but however, they did not mention the name of their organization's name.
13. Few of the respondents sent an email stating that, though they mentioned the name of their organization but they asked to consider as their personal opinion and do not consider as the voice of the whole organization.

14. Few of the respondents asked for a bonafide certificate to verify and then respond. This indicates that they wanted to ensure that the information reaches the correct people.
15. We saw a notable increase in response, once we started attaching the bonafide certificate by default with all the LinkedIn messages, which indicated the trust increase between the researcher and respondents because of the official letter issued by the university which is the UGC approved academic body.

UNRECIPROCATED BEHAVIOR

1. Why the response rate was less when we communicated with the respondents through email?
2. Did the respondents feel that the researcher was not personally known to them and hence they did not want to respond?
3. Is it possible that the respondents did not have sufficient knowledge in the research area so they hesitated to respond back?
4. Is the non-disclosure agreement made by the users to their organization have made them think more before they respond to us?
5. Have the respondents thought that the information what they are going to share will invite them into issues?
6. Since the questionnaire is shared via google form, have the respondents felt that their personal information will be disclosed which may trigger some issues for their job?
7. Female responses were less, is there any gender-based fear? Though they are from IT industry?
8. Do the respondents have sufficient information that their input is going to impact the research outcome?
9. Have the respondents felt this is just another marketing survey where they generally get from websites?
10. Is there any connection between the respondent's mindset with the researcher's education qualification and designation held?

CONCLUSION

It is a well-known fact that the data collection stage has various challenges with respect to approaching people, appealing people, build a trust with the respondents and reaching the required number of responses. In our academic research also, we had multiple challenges throughout the data collection period. In every stage, we had analyzed the previous stage's outcome, compared with our expectation and explored the other options available in front of us which helped us in getting the good number of responses in 7 months period. Though we had a plan to complete the data collection in 6 months, we took 7 months to reach our target, but however, this kind of issues are pretty normal in any formal research when we deal with the research objectives which requires a good sample size from the global participants. We had shown our innovative thoughts in creating the questionnaire, sharing them electronically, effectively utilized the human resource from the social media. Also, when we struck with the lower number of data we had gone beyond and above, came up with an alternate strategy which was really worked out. So the data collection process in any research is all about the proper

planning, right methods, continuous efforts and having back out plan as an alternate approach, which will result in successful completion of that particular research.

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