

# A Novel Questionnaire Preparation of Construction Project

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## ABSTRACT

Training needs analysis (TNA) determines the hole between 'what's' and 'what should be' instances. Building enterprise is very most important for growth, progress and fiscal development of a nation and accordingly the assignment of analyzing training needs in construction tasks is very foremost side within the gift scenario of Indian development industry. Many of the building initiatives are pushing behind the schedule and coaching imparted to employees is just not established on systematic evaluation. On this gain knowledge of a model questionnaire has been all set which is distinct for the reason that questions related to training desires evaluation as well as reasons of prolong had been incorporated. The data so bought might be easy for evaluation and the outcome of hypothesis testing will likely be extra secure.

**Keywords:** Training needs analysis, Construction project, Ethical issues, Relative Importance Index (R.I.I.)

## I. INTRODUCTION

Training needs analysis (TNA) is a procedure wherein wants are recognized and damaged into their component constituents to investigate the options of the challenge. It determines the hole between 'what's' and 'what should be' instances. The construction prolong is among the foremost problems in India as well as in different international locations, which results in time and rate over-runs seeing that of which group, contractor, client, every person related with the construction venture, suffers. Besides this development enterprise is very primary for growth, progress and financial development of a nation. Hence the challenge of analyzing coaching needs in development projects is very important aspect within the present scenario of building industry. A questionnaire is a system which is used to receive know-how through amassing information from the exact respondents for a study matter. Knowledge is of two varieties viz. fundamental and secondary. The major information is that which is amassed afresh, for the first time and hence is long-established in persona. However the secondary knowledge are those which have been combined previously by using others and are used for a new study hindrance for simply compilation. The predominant information can also be accrued by way of

remark ways, interview ways, through questionnaire survey and so forth. The secondary information can also be got through literature review, released books, articles and the internet. Knowledge assortment may be very important to fulfill the goals and objectives of a research. When a questionnaire is used to gather knowledge, it will have to have the talents to compare with the specifications of the study ways. Within the practice of this questionnaire each fundamental as well as secondary information had been used to make it extra risk-free and practical. Brief and easy questions related to needs comparison and building management had been integrated. Through utilizing this questionnaire training wishes analysis would come to be less difficult as it finds gaps between what's and what must be instances more effectively and items of TNA can be developed with more authenticity..

## II. METHODS AND MATERIAL

### 1. Literature Review

The prominent literature on questionnaire regarding training needs evaluation in construction industry had been studied to take a look on the one-of-a-kind points and necessities of construction projects in terms of

training requirements. Some of the prior reports are as follows:-

#### **(A) Questionnaires on motives of extend:**

Memon et. Al. 2010 studied 24 motives affecting construction rate in big building projects and found that surprising ground conditions and fiscal difficulties confronted through the contractor had been the most severe issues. We do agree that if a contractor faces financial issues it would influence the development of a task very badly but when right survey earlier is done it could actually take of issues related to unexpected ground stipulations.

Sunjka and Jacob 2013 demonstrated speculation concerning enormous explanations and results of mission delays in the Niger Delta region, Nigeria which resulted within the inadequate planning was one of the vital most important explanations in charge for delays. That is actual for other nations as well in view that faulty planning impacts all of the areas of building work. Aibinu and Jagboro 2002 via questionnaire survey concluded that point infested and rate infested have been the universal results of development delays on undertaking supply in Nigerian construction industry. In India additionally this is among the greatest problems extra specially in government sector.

Haseeb et. Al. 2011 studied the reasons and effects of delays in giant building tasks of Pakistan, Kuwait and acknowledged that finance and payments, inaccurate time estimation, terrible website online administration are most important motives of delay.

Alinaitwe et. Al. 2013 investigated into the explanations of delays and price overruns in Uganda's public sector development tasks. They determined that most important explanations have been "changes to the scope of work, delayed repayments and terrible monitoring".

Tawil et. Al. 2013 acknowledged that motives like extend in receiving growth repayments, issues in contractor administration scarce of building materials make contributions to extend in undertaking development.

Mukuka et. Al. 2013 via learn of earlier literature evaluation made a theoretical assessment of the reasons and results of building assignment prolong and brought

up that equipment breakdown, inefficiency of employees and unhealthy weather also rationale delays.

Alnuaimi, and Mohsin 2013 in their research, studied 34 factors of prolong in completion of development initiatives in Oman and printed that incorrect planning was essentially the most principal aspect. Frank et. Al. 2010 in their learn investigated delays in building construction projects in Ghana by way of questionnaire and located that underestimation of the fee of initiatives used to be very principal component out of 32 other explanations.

Hamzah et. Al. 2011 by way of literature evaluate studied the explanations of building delays beneath two segments i.e. Excusable delay and non-excusable prolong. While getting ready a model questionnaire all above reasons have been considered and most influencing 29 motives were integrated.

#### **(B) Questionnaires on training wishes evaluation:**

The goal of the article by means of Rodrigo and Abbad (2013) is to systematically review TNA scientific literature and to point out some feasible developments. Database, website, wiley online library and fifty one articles starting from 1978 to 2010 had been consulted. The paper displays this fact that there is little concern with building concepts concerning TNA and it suggests that TNA research should be based on measurable human competences gaps. Questions for assessing competencies have been introduced to the model questionnaire ready on this study.

According to Chang et. Al. (2012) training is a process to develop the working capability of employees. Training is one in every of the approaches to clear up organizational problems and it have got to be equipped to solve organizational issues. The paper through Teixeira et. Al. 2006 indicates that a survey was conducted in four European nations i.e. Portula, Poland, Spain and Lithuania on the needs of training in management of construction tasks. A questionnaire was once circulated and information have been collected and analyzed. Training desires had been assessed.

He members showed powerful curiosity in the following area:-

1. Mission idea development.

2. Planning and scheduling
3. Cost estimation and administration
4. Excellent administration
5. Procurement and tendering system.
6. Health and security administration.

Challenge conception progress is part of Planning and scheduling so within the present questionnaire this has not been taken individually. The paper with the aid of Mselle and Manis 2007 describes necessity of coaching of web site managers, as lack of leadership, accountability, training and knowledge creates issues during building. Web site managers, construction companies, consulting companies and customers undergo as a consequence of these problems. Emphasizing the necessity for coaching, the paper suggests pursuits, constitution and benefits of training program. Training want assessment file used to be ready on strong waste administration Udayakumar and Karthikethan 2014 offered a paper on profession up-gradation of civil engineers by means of coaching and progress at M/s URC construction (P) Ltd. India which describes BIM (constructing expertise Module), an idea for mission planning, designing, evaluation, monitoring, costing and knowledge administration in building. The personnel had been grouped in to four classes - brisker, 1 to 3 years, 4 to 7 years and more than 7 years skilled humans. On the job & of the job training module used to be designed. The paper states that all the construction industries should focus on their men and women development for his or her steady career up-gradation. Nonetheless in the model questionnaire 5 categories of working experience ranging from brisker to experience of greater than two decades were taken.

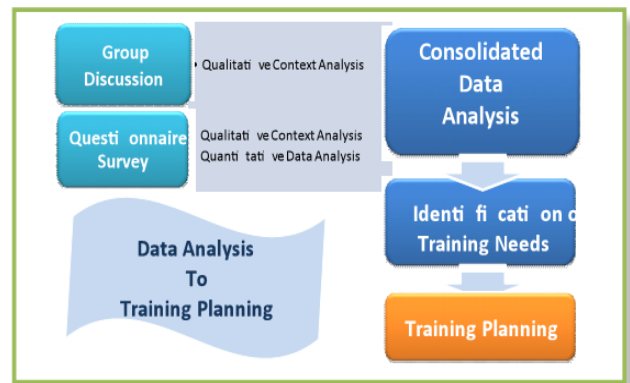
### III. RESULTS AND DISCUSSION

#### 1. Design Methodology

The first step in TNA is to research information gathered. The accumulated information and know-how had been composed of: i) secondary data/understanding; and ii) survey outcome of the questionnaires; and iii) survey results of the group discussion.

The figure.1 indicates the method of movements from data analysis to training planning. Situated on the results of group discussion and questionnaire survey, date analyses are accomplished. Then, analyzed data are used for training wants to establish. Based on the known training needs, training planning which involves

coaching module and curriculum, schedule, and trainees, is done.



**Figure 1.** Flow of Activities from Data Analysis to Training Planning

There are two types of data: quantitative and qualitative. Numerical information is quantitative. All other sorts of data are qualitative. Quantitative knowledge includes age of the interviewee, and the numbers of coaching attended. Qualitative data include words, snapshots, and images.

Quantitative information can also be gathered, scored, and analyzed more with ease and speedily than qualitative information. They is also summarized and provided making use of more than a few sorts of tables, charts, and graphs. In distinction, qualitative knowledge is extra tricky and time-consuming to collect and analyze, however they furnish wealthy and detailed know-how.

The computer software for inspecting quantitative data such as Excel improves the ease, accuracy and speed of data analysis. Quantitative information analyses are constrained to descriptive facts. These analyses truly describe the survey knowledge. To research quantitative knowledge, create a spreadsheet that includes all of the tools for which such knowledge was gathered. The next desk shows an example of one of this spreadsheet.

**Table 1.** Sample Spreadsheet

| Gender | Age | Exper. in Govt. | Exper. at present position | Training attended (Y/N) |
|--------|-----|-----------------|----------------------------|-------------------------|
| m      | 25  | 3               | 2                          | Y                       |
| m      | 35  | 4               | 2                          | Y                       |
| m      | 45  | 8               | 3                          | N                       |

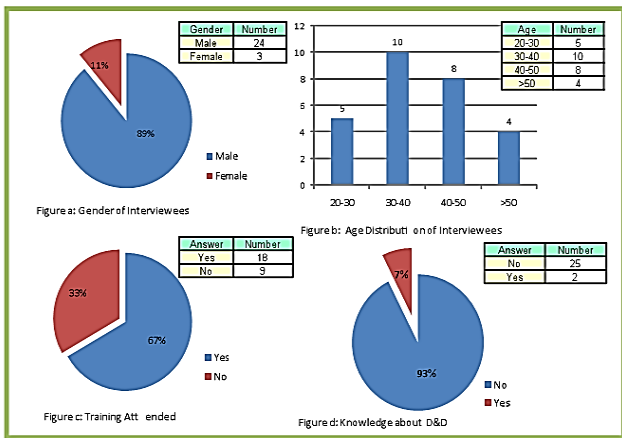
|   |    |    |   |   |
|---|----|----|---|---|
| f | 28 | 2  | 4 | Y |
| f | 55 | 10 | 5 | N |

The following table indicates a sample tally sheet for analyzing the quantitative knowledge got from a survey question. We could create a similar tally sheet for quantitative knowledge obtained through other ways meaningful of statement and interview.

**Table 2 : Sample Frequency and Percentage Calculation**

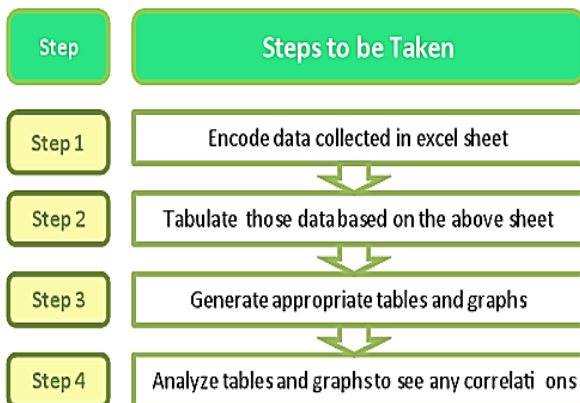
| Question Item                    | Response    | Frequency  | Percentage   |
|----------------------------------|-------------|------------|--------------|
| How long are you working at MOI? | 0-9 years   | 59         | 34.5         |
|                                  | 10-19 years | 53         | 31.0         |
|                                  | 20-29 years | 46         | 26.9         |
|                                  | 30-39 years | 12         | 7.0          |
|                                  | >40 years   | 1          | 0.6          |
| <b>TOTAL</b>                     |             | <b>171</b> | <b>100.0</b> |

The following table indicates a pattern of tables and generated circle graphs and bar graph. These are examples of distribution of interviewees via gender, age, coaching attended, and talents about D&D.



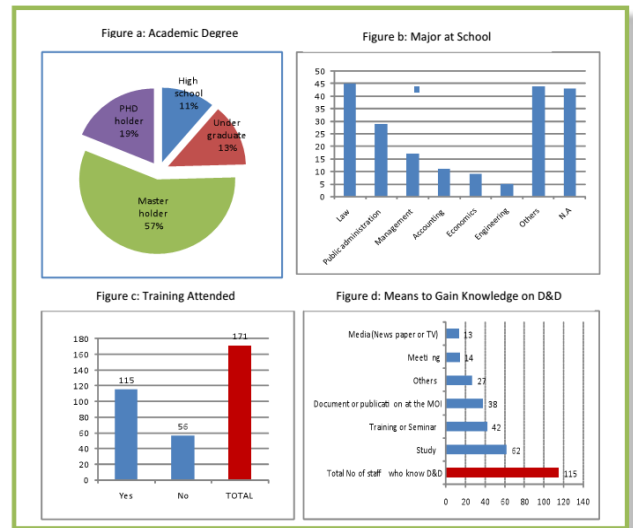
**Figure 2. Sample Tables and Graphs**

The quantitative analysis was done as follows.



**Figure 3. Steps to Be Taken for Quantitative Analysis**

Graphs created are shown in the figure below.



**Figure 4. Sample Graphs**

#### IV. CONCLUSION

The questionnaire is prepared taking into consideration explanations of delay based on actual quandary experiences of website engineers who preserve construction work at root level as good as high rating engineers, architects and contractors in respect of Indian development enterprise. It additionally includes of questions related to training needs to assess more than a few features of TNA in order that proper coaching applications could be performed thus. The questionnaire so ready would make TNA on building projects easier and the outcome of speculation trying out, mannequin development and gaps so came out would allow us to handle delays in building tasks and to have an summary of the predicament in terms of training, so prevailing in construction enterprise.

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