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HND COMPUTING IDM

Fact finding Techniques

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# **FACT FINDING TECHNIQUES**

## What is fact finding?

Fact-finding is the process of collecting data or information, which usually revolves around a particular technique that includes a sample of documents, research, observations, questionnaires, interview scripts, and requirements planning.

A systems analyst often uses a fact-finding technique to develop and implement a solution to a problem that he has been asked to address. A fact is an information that is relevant to a particular topic. Pure facts that are highly relevant to the subject in question are crucial in the analysis phase of the software development life cycle, as neither tools nor developers can be used effectively without properly extracting the core software development ideology.

Fact-finding is involved not only in the analysis phases, but also in the design and post-implementation reviews, but not as intensively as they are used in the analysis phase. Facts can be proven for relevance and accuracy based on three main characteristics: (UKEssays, 2018)

1. Date
2. Process
3. Interface

## Common fact-finding techniques

There are six common fact-finding techniques.

* Sampling of existing documentation, forms and databases
* Research and Site visits
* Observation of the work environment
* Questionnaires
* Interviews
* Prototyping

### **Sampling of existing documentation, forms and databases**

The best way to analyze your existing system is to gather facts from existing documentation rather than from human sources. There are different types of documents to collect data from existing documents. Among which

* E-mails
* Customer complaints
* Suggestion box notes
* Reports that document problems
* Problem performance reviews
* Samples of completed manual forms
* Reports and samples of completed computerized forms

There are 2 commonly used sampling techniques, namely randomization, and the other, stratification. Randomization is the process by which you select random sample data. Stratification is the systematic process of inferring the variance in the sample data taken. (W3 Schools , 2021)

### **Research and Site visits**

Cross-site research is the process of examining similar problems or the same problem previously solved by other sources through human testing or pure documentation by a company. To solve the problem, the analyst will try to visit the websites of other companies to see if they have experienced similar problems and how they came to a solution. In doing so, the analyst may attempt to search databases, books, and case studies. (W3 Schools , 2021)

### **Observation of the work environment**

Observation is the simplest and easiest technique for finding facts, requiring nothing more than your presence in the work environment. Through this technique, the analyst participates in the organization, studies the flow of documents, applies the existing system, and communicates with users.

The key to success through this research technique is to see everything through the eyes of the user who is an expert in the field. In this way, problems experienced by the customers of a system can be identified immediately. Moreover, through observation, it is possible to qualify the problem if it is trivial or if it is something that needs to be addressed as soon as possible by observing the impact the problem has on the employees of a company. (W3 Schools , 2021)

### **Questionnaires**

Questionnaires are also one of the most useful fact-finding techniques for gathering information not only from users but also from employees. But the greatest strength of the questionnaires is also their greatest weakness. A questionnaire is biased from the user's perspective, each user may have different levels of expectations and different levels of knowledge that support their understanding, so it can be difficult to reach a conclusion.

This problem manifests itself more strongly when the questionnaires are used in companies with a wide variety of sectors with people with different knowledge bases. As such, the questionnaires are recommended for audiences that are focused on a specific knowledge base, in this way the bias and the level of expectation lean towards a single particular path.

Questionnaires are very effective in the initial stage of providing a brand new solution than in creating a solution to a problem, this is because they can outline the expectations, requirements, and scope that a user sees as a product.

There are two types of questionnaires:

1. **Free-format:** Users are allowed to answer questions freely; response is not mandatory. This is ideal for situations when you require reviews, feedback, opinions, possible improvements and experiences.
2. **Fixed-format:** A predefined format of questions is put, then each user has to answer the question. Response is mandatory as the questionnaire is structured. Multiple-choice questions, rating questions and ranking questions are usually used in this format. Ideal for situations where the analyst is trying to put together the expectations, requirements, scope and the outlined structure of a solution or system. (W3 Schools , 2021)

### **Interviews**

This is the most commonly used technique because it is easiest to find the root of the problem. Interviews are usually face-to-face, where you ask someone questions that provide useful information. This perception is measured to understand, verify, clarify and perceive facts about something.

It is more interesting for a systems analyst to conduct interviews than to have a second or third person do the interview for him, because, during interviews, the clues left by the interviewee's gestures are very important. This is because people communicate for 70% psychologically through gestures and body language. Thus, if the analyst is present in real-time to view this part of the communication, future events will be much more accurate.

However, if the analyst communicates poorly or the interviewee communicates poorly, the results of the interview will not be as perfect. Communication is key in the fact-finding technique of interviews. (W3 Schools , 2021)

### **Prototyping**

Prototyping is a specialized fact-finding technique used to collect the system or solution requirements section. Prototyping is a process of sampling a small portion of the existing system working model, then observing, interacting with, and then understanding. This is also used in the design phases of the software development cycle.

The best prototyping technique can be gathered after a trusted knowledge base is found and researched. A fact sheet should have been found before prototyping was used. For example, prototyping allows you to measure the correctness of previously found facts. (W3 Schools , 2021)

## Fact finding techniques Compare & Contrast

In this section, similar fact-finding techniques will be compared and contrast is drawn. I think there's no point in comparing or contrasting different fact-finding techniques, because the end objects of certain fact-finding techniques are different in simpler terms, and their goals are different. So, comparing prototyping with quizzes seems pointless, a better comparison is prototyping with samples.

The first sentence of each comparison/contrast will justify why I chose to compare or contrast them. To justify having similar end goals or purposes and as such qualify for comparison and contrast.

### **Prototyping & Sampling of existing documentation, forms and databases**

Both fact finding techniques use the same core, they sample different things to understand. (UKEssays, 2018)

* Sampling is a fact-finding technique that can be used in the early stages of analysis, prototyping should be used in the later stages.
* Sampling is generally used to collect facts; prototyping is used to measure the correctness of facts already found.
* The facts found through sampling may be outdated, but prototyping provides accurate and current facts based on a currently existing system.
* Prototyping requires a certain level of knowledge and experience to work, but sampling doesn't, you just need to be able to read.
* Prototyping needs a way of working in order to exist, which is rarer than finding the system documentation for sampling. Therefore, you are more likely to use sampling than prototyping.

### **Research and Site visits & Observation of the work environment**

Both fact finding techniques require little to no investment of resources. Their core is observation, and the end goal is to understand. (UKEssays, 2018)

* Public cooperation is not necessary for a site visit, observation is.
* Visiting the site will take much less time than observing.
* The facts obtained when visiting the site are concrete. They have been tested and observed countless times. Sightings in the workplace can only occur once and never again.
* Observation of the work environment helps to understand the impact that a particular problem has on the work environment; this is not possible by visiting the site.
* Visiting the site is not always successful; There is no guarantee that you will find solutions or facts related to your problem. However, observation will certainly help you understand the situation and find a solution in the moment.

### **Questionnaires & Interviews**

Both techniques rely on an outside audience, the facts that you obtain through these techniques may or may not be biased. (UKEssays, 2018)

* The questionnaires do not require the presence of the analyst while the interview requires not only his presence but also an interviewee.
* Good communication is a mandatory requirement for interviews, questionnaires do not have this requirement.
* Interviews can take a long time with a large audience; questionnaires can be collected in a few hours if desired.
* Interviews are ideal in situations where feelings, experiences, and all that is an important requirement to understand problems. Quizzes fail at times like this because feelings cannot be accurately expressed in words.
* For questionnaires with a large audience, a sufficient budget is needed to design, test, and then print the questionnaire. Interviews are on a low budget.

# **FACT FINDING TECHNIQUES THAT I USED**

I mainly used three fact finding techniques that I have listed above to find facts to gauge the system and user requirements of the solution that is to be put forward.

1. **Site visiting** – This technique was used as a way to find facts about similar situations that have existed, and the background of IFRB. IFRB is set on traditional project management approaches, I researched other similar organizations that are transitioning from traditional project management to agile project management, the problems they faced, the problems they had, the motivation/reason they required in order to move from traditional to agile. This also helped me to gather facts about while people fail to deliver on time during traditional project management.
2. **Sampling existing documentation** – This technique was used to understand intensively the system requirements that have to be met to find a proper solution. The existing documentation is accurate and up to date and seems to convey the requirements that must be completely understood in order to provide a proper solution.
3. **Questionnaires** – In the form of a fixed format, this helped me to understand what exact the problem is in the existing situation that we must aim to solve through our solution. This allowed me to understand the quality that we must provide which is a strong expectation in the part of the user. Ratings and rankings allowed me to fathom the requirements of the users that must be met in order for our solution to be something that meets their expected workflow.

# References

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