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FEA Plan Group Project

Addressing Employees Performance In Digital Literacy Project

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IDE 712: Analysis for Human Performance Technology Decisions

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Introduction

A Front Analysis is a necessary part of solving human performance problems because it implies analyzing systematically in order to detect the current problematic performance and confront it against the desired performance and determine the needs from the two elements. This allows the instructional designer to come up with possible solutions that respond to possible causes causing the problems to happen and cover the needs.
This project report is a front-end analysis of a case study in Pakistan where employees failed to fill the report into the training system. In this document, our team shows how to approach this problem, what methods, techniques and tools that can be used to perform the front-end analysis and propose effective solutions to this problem.

Problem Identification

Context

Circle, an organization in Pakistan, initiated a Digital Literacy Project to train house-based women workers for basic digital skills. After a successful test with 60 women UN Women approved another round for 300 Women and this time hired a Project Manager to manage the project. The role of the project manager was to address the current cycle of grant, review curriculum, develop a system, policies, tools, and design expansion plan for 10,000 - 1,000,000 with a team of 30 women. As a Project Manager one of the key tasks was to provide a monthly progress report.

On the other hand, if any stakeholder asks for an update, the Project Manager is responsible for providing real-time data. The project Manager designed a reporting system for weekly and monthly updates from the team. The Board of advisors approved it, and the CEO asked to implement the system immediately. Three of the team members responsible for providing key insights of the training as Lead Trainers were hesitant to fill the report regularly. They always skipped the report and bypassed the communication by telling the CEO different reasons. The CEO always allowed them to extend the deadline but at the same time asked the Project Manager to provide the real-time data. That cost the organization delayed processing of the other operations like reports, scale-up plans, marketing material design, and publications.

Problem Statement

The Project Manager was not receiving training reports on time, which led to delays in reports and could cause further errors in the project. Three of the team members (lead trainers) are not filling the report regularly delaying monthly reports, social media updates, and scale-up plans. The desired performance is that employees must fill and submit real-time data and be available for all stakeholders for monthly reports and on request. This should be done 100% of the time and at a predetermined time.

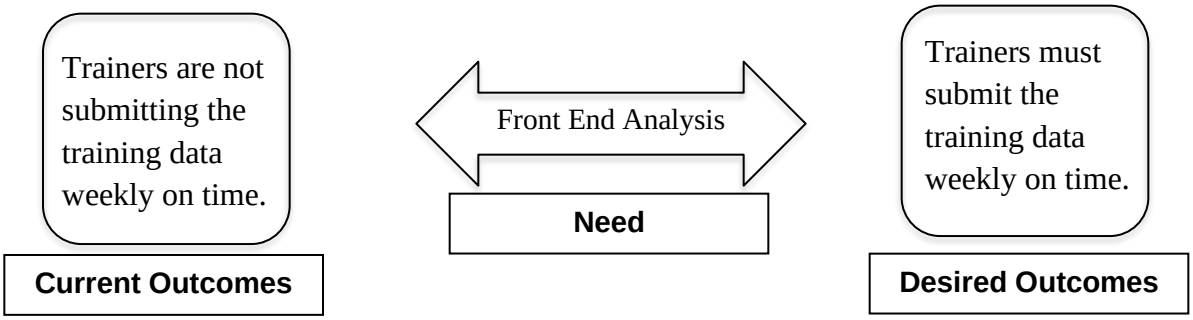

Figure 1. Front End Analysis

Importance Of Performance Problem

Reporting system provided the company with up-to-date information and necessary data for preparing social media posts, monthly reports, need analysis, and project policies on time. However, delay in data despite multiple reminders affected the health of the team's working environment. As a result, there are delays in monthly reporting and real-time data delivery to stakeholders. If the problem will not be resolved on time, there are chances the company will lose the scale-up project grant.

Whose problem?

The problem belongs to Lead trainers. It is initiated by one of the lead trainers who also worked in the first phase of the project when the systems were not in place. Then she channelized it to the other 2 trainers. So, a total of 3 lead trainers were causing this problem.

How big/frequent?

The problem was continuous. They were delaying the data from week 3 of starting the project. Every week there was a new reason not to submit the data on time.

Who is affected?

The company's reputation and project growth can be affected by the problem. At the project site following were directly affected:

- Project Manager
- Marketing & Media Team
- Evaluation Team
- Scale-Up Team

Stakeholders

There are the following stakeholders:

- **Company Director**: She can ask for real-time updates anytime. She was working on presenting a scale-up plan to different partners and investors
- **Project Manager**: He is responsible for project success, monitoring, preparing scale-up plans, and providing data to the company director and external partners.
- **Project Assistant:** She is responsible to collect the data and write the reports for the Project Manager. She is also responsible to distribute the data findings within the team where necessary.
- **Operations Manager:** He is responsible to manage all the logistics for participants like dispatching of power banks and mobile recharge.
- **Lead Trainers:** They are responsible for providing the data**.**
- **Client (UN)**: They are responsible to release the funds based on project progress and discuss future collaborations.
- **Communication Manager**: She is responsible for designing the marketing campaigns based on data findings.
- **Graphic Designer**: She is responsible to design the visuals for the marketing campaign based on scripts provided by the communication manager.

FEA Plan

Model Selection

To understand better what model would fit this scenario, first the team decided to use Rossett's Purpose-based Training Needs Assessment Model (Figure 2):

Figure 2. Purpose-based Training Needs Assessment Model. Adapted from Rosset, (1987), p.16

Optimal Performance*:* Employees fill and submit real-time data and data will be available for all stakeholders for monthly reports and on request.

Actual Performance*:* Three of the team members (lead trainers) are not filling the data in report regularly, delaying monthly reports, social media updates, and scale-up plans.

Need*:* To investigate the causes of not filling in the report by employees.

Possible causes*:* There can be multiple causes starting from the lead trainers' lack of particular skills, knowledge or motivation to fill in these reports regularly, or even their personal problems. More data analysis is required to understand the causes.

For data analysis, our team will be using Rosset's plan of the relationship between techniques, tools, and purposes. According to her, techniques in combination with the tools give more understanding of the purposes, causes, and solutions to the performance problems (Figure 3).

Techniques	Tools	Purposes
1. Extant data analysis 2. Needs Assessment 3. Subject Matter analysis	1. Interviews 2. Observations 3. Groups 4. Surveys	1. Optimals 2. Actuals 3. Causes 4. Feelings 5. Solutions

Figure 3. Analysis techniques, tools, and purposes. Adapted from Rossett, (1987), p. 24.

Techniques to be used

To analyze the performance problem, we propose to first focus on the background of the problem and collect the data with the help of PESTLE Analysis, gather more information about the potential causes of the problem using Gilbert's Behavior Engineering Model, conduct Subject Matter Analysis via Job Task Analysis (JTA) and Procedural Analysis, conduct document analysis via Tracking and analyze the information with the help of Scanning and Enacting Techniques.

PESTLE Analysis

PESTLE Analysis can serve as a data analysis tool as it gathers different perspectives for the case. PESTLE stands for Political, Economic, Social, Technology, Legal and Environment where each dimension of the problem is analyzed accordingly. Environmental scanning

- **Political**: The Project was based on UN grant. The extension of grant is depending on the performance data and new partners will join the grant. To avail the external grants organization will need approval form foreign and interior ministries.
- **Economic**: Some trainers might think that the PM and their team delayed the process purposefully. The PM or Director might ask for negotiation to increase the pay for this new activity. According to the company director they must invest 4 hours per day so they would have enough time remaining to do this task. If a company releases extra funds, it will affect the project budget.
- **Social**: The company director set the wrong expectations for staff from the beginning. She wanted to maintain good relations with all the team members and didn't want to fire anyone who didn't respond credibly to the responsibilities. At the same time, she asked the PM to push the team again and again to collect the data. Moreover, a male PM was leading a team of 30 females and working with female participants only. Due to participants demographics and cultural barriers PM was not allowed to join the online sessions to evaluate the importance of trainers' weekly data. From the social norm's perspective, the PM would be frowned upon if he had forced anyone to complete the tasks and/or punish someone. It may affect the quality of our training and his authority.
- **Technology**: The required data entry process needs access to technology and the internet. All the trainers were provided with internet devices and packages. Technology and equipment should not be an issue as the same tool was part of our training curriculum. Although unavailability of internet due to some power cut, cable cut, or some network blockage issue can be a barrier.
- **Legal**: All open-source tools had been used but Software License can be an issue for the company due to its limited budget. Privacy of data can be a hurdle.
- **Environment**: All the training and operations were remote. Team and trainers were based in 6 different cities. Students were based in 2 different cities. There was no possibility of in person interaction. The team communicated by broadcasting in the team WhatsApp group. The PM

assistant helped the PM to manage the daily communication with the team. The PM helped any individual through Zoom calls when necessary. The PM and Director met for scaleup twice a week. There was a team meeting once a week. All the trainers were responsible for organizing two instructor lead sessions through Google Meet. Trainers were responsible to send the self-learning content via the WhatsApp group every day with the help of their assistant.

Extant Data Analysis

Extant data analysis helps to determine the relationship between employee effort and organizational goals, and it involves inference, observation and persuasion only (Rosset, 1987). One of the techniques used for extant data analysis is environmental scanning. It is the acquisition and use of the information about events, trends and relationships in an organization's external environment to assist management in planning the future course of action within the organization. Its purpose is to scan the environment with the aim to identify the external forces to change in order to develop effective responses and improve planning.

Tracking

Tracking will be used for extant data analysis. Its purpose is testing the causes for the performance problem identified via the previous tools. Tracking procedure is described below.
The hypothesis to be tested:

- Some of the employees don't fill in the report because of a shortage of time
- Some of the employees didn't receive proper training that could help them to fill in the report on time.

The following data will be collected:

- Audit Reports
- Manager's Reports
- Operations Manual
- Call-back Reports
- Project Reports

Tracking plan

Reporting Criteria	Explanation
Type of Study	Performance Problem Analysis in Digital Literacy Project
Problem or Question of Concern	The Project Manager was not receiving training reports on time, which led to delays in reports and could cause further errors in the project. Three of the team members (lead trainers) are not filling the report regularly delaying monthly reports, social media updates, and scale-up plans.
Documents to be analyzed	Late turn-in reports are written by employees in their own words with input from a lead trainer.
Documents Analysis Process	Tracking: Categorize and count number of delayed reports and people responsible for them; Collect the data about the employee's training for filling the report.
Coding Process and Categorical Breakouts	Each delayed report is coded and sorted by the employees in charge; Total number of times with missed reports collected by person; Compare the data of responsible personnel for the late report with the training data.
Patterns that emerged	Collected data will be analyzed and common patterns will be reported to give insights. Qualitative data will be encoded using color coding techniques while statistics will be used for quantitative data.
Assertion and Implications	With insights learned from the emerging data patterns, experts will analyze what are real implications to the organization and other stakeholders.

Table 1. Tracking Plan for the Performance Problem

Needs Assessment

In addition to this, Needs Assessment can be conducted using Gilbert's Behavior Engineering Model (BEM) which applies a systematic approach to analyze the problem and establish the potential causes on the environmental level and individual level, inquiring the information, instrumentation, and motivational dimensions. Needs assessment should also start with Searching and Conditioning Viewing to get more information about the problem.

- Searching, which takes place when goals of the information needs are well-defined, but not restricted to a few issues. It can be used for primary analysis of the issues to shorten the list of possible causes of the performance problem and people responsible for them and update the existing knowledge about the situation. For this stage, qualitative data should be gathered.
- Conditioned viewing, which focuses on a small number of well-defined issues with widely accepted assumptions and norms. Conditioned viewing is limited to the routine documents reports and databases and can work more effectively after the searching has taken place.

After that, more detailed analysis should be done using Gilbert's Behavior Engineering Model.

Steps of Gilbert's BEM	Questions
Data	Do the trainers know what is expected from them? Do they know the rules and guidelines to perform?
Instruments	Do they have adequate tools to fill the reports? Are their computers working properly? Is their internet connection working?
Incentives	Are they well paid? Are they praised for their good work and punished when not performing? Do they value breaks or money in terms of compensation?
Knowledge	Do the trainers have sufficient computing skills to fill the report? Do they understand the language used in the forms to be filled?
Capacity	Do the trainers have enough time left to fill the report? What does their daily work look like? Are they too busy or too tired at the end of the day to fill the report?
Motives	Do the trainers use other reporting channels that they find more valuable than the computer system? Do they find this system useful? Do they see the new system as an issue or a solution?

Table 2. Gilbert's Behavior Engineering Model Questions. Adapted from Gilbert, (1996).

Subject Matter Analysis

Subject Matter Analysis will be conducted via the following tools:

- Job Task Analysis (JTA)
- Procedural Analysis

At the individual level, a Job Task Analysis (JTA) will be performed to understand the role of each trainer, the current job he performs and later define clearly (document) what job he should be performing to make the system work well.

JTA is a powerful tool that we will use to collect data about the tasks that each trainer is performing currently. JTA will help to document this extensively. JTA as a data collection tool lists duties, divides them into tasks and then sub-tasks. Trainers are then surveyed to collect their opinions on the level of difficulty, importance, and frequency of the task.

After diagnosing the problem, with an assumption that there's a gap in knowledge, procedural analysis will be used to come up with a tailored solution to the problem. Procedural Analysis is particularly focused on Business and Industry to describe the on-job performance of laborers and skilled workers. In businesses tasks like counting numbers, balancing cheque books, collecting data, and writing sentences have been outlined in procedural analysis. Procedural Analysis influences from the perspective of behaviorism, programmed instructions, and computer programming. It breaks up a task into its component behaviors or performances, representing actions, decisions, and paths as a sequence of behaviors. Almost all procedural analyses are completed using four basic symbols:

1. For input and exit points
2. For operations where the performer completes some mental action (recalling, selecting, imagining)
3. For decisions, where the performer must choose one of several alternative operations to be done next
4. For sequence directions: the arrows indicate forward or backward steps or branch paths to a previous step

According to the business example, Procedural analysis can outline procedures like logging to a computer or filling out a form. Performance analysis has created Paper trailers of departmental procedures like billing, invoicing, or gathering project data. The paper trail is used to trace the progress of the paperwork and to identify bottlenecks or errors in the completion process.

This case should follow the business procedural analysis. The demand of the performance problem is to organize the training, access the form, and submit the weekly data. This data will help us to track the progress and problems faced by participants and trainers.

Tools/Procedures to be used

For the described above techniques, various tools have to be used: observing, surveys, and interviews.

Observation

Observing is required for Tracking technique, as well as for Job Task analysis and Procedural analysis. Direct observation by the analyst team during the working process can take place, where notes about the stakeholders' performance and their interactions to one another can be recorded. An observation guide can help to collect useful information to be used for future analysis.

Observation guide

Case	Stakeholder(s)	Situation	Actions	Comments
1	Project Employee	Received Report Request	Got distracted by the talk with the colleague	After an hour started filling in the report
2				
etc				

Table 3. Observation guide. Case 1 is presented as an example

The observer should remember that it is not allowed and does not help to solve the problems in the organization or ask questions as it can spoil the reliability of data.
After the observation is conducted the job description report should be created.

Surveys

Surveys need to be used in combination with Gilbert's Behavior Engineering Model (BEM), as they require to gather information from all the stakeholders to support or reject the assumptions of the problem causes. Survey's purpose is to find out what the large numbers think/feel about the problem. For the current problem the 2 surveys can be conducted via Google Forms - first for internal stakeholders (Digital Literacy Project's team and the Company Director), second can be a separate one for the Lead Trainers (8 people) who cause the performance problem directly. As the department is not big (30 people), they all can take part in the survey.

All the survey questions should follow 6 types of the questions, according to Rosset (1987):

1. Seek a general picture of the problem.
2. Seek details of the situation.
3. Demand proof of what the job incumbent knows.
4. Seek feelings.
5. Seek the cause(s) of the problem.
6. Seek basic information about the respondent.

Example questions for all the stakeholders survey can be the following:

1. "I know my responsibilities for this work." Check only one.

a) ..... strongly agree
b) ..... agree
c) ..... undecided
d) ..... disagree
e) ..... strongly disagree

2. "If I struggle with any of my tasks I can use guidelines prepared for such cases." Check only one.

a) ..... strongly agree
b) ..... agree
c) ..... undecided
d) ..... disagree
e) ..... strongly disagree

<...>

…10. "Communication channels that the corporation selected are easy to use." Check only one.

a) ..... strongly agree
b) ..... agree
c) ..... undecided
d) ..... disagree
e) ..... strongly disagree

Example questions for Lead Trainers survey can be the following:

1. Which of the following, from your experience of working on a project, contributed to not filling in the report to the Project Manager? Rate each as follows:

   2 = major factor 1 = a factor 0 = not a factor

   a) ..... a. technical issues
   b) ..... b. instructions were not clear
   c) ..... c. time limitations
   d) ..... d. it was not included in job description
   e) ..... e. personal issues
   f) ..... f. frequency of filling in the data is high
   g) ..... g. it's too complex to learn
   h) ..... h. personal hostility to the Project Manager
   i) .... .i. low salary
   j) ..... j. I just forgot

2. Please check any of the training courses you have attended since becoming a Lead Trainer in this company. Check all that applies to you.

   (Here all the training courses that Lead Trainers were supposed to have conducted should be stated in order)

Interviews

Interviews can be used as a part of Job task and Procedural Analysis, and partially for Gilbert's Behavior Engineering Model (BEM) as well. Several interviews of the stakeholders affected by the performance problem should be conducted to learn the different perspectives on the problem. Project Manager and his Assistant can be interviewed together (1 hour), Communication Manager will be interviewed individually (30 min to 1 hour), and all Lead Trainers will also be interviewed individually (30 min to 1-hour interviews) in-person. An advantage of the interview is that it helps to extend the knowledge about the performance problem and make personal contact with people. While preparing the interview questions, 5 major topics should be covered:

1. Finding optimals
2. Funding actuals
3. Finding feelings
4. Finding causes
5. Finding solutions

Example questions for the Project Manager, Assistant, Communication Manager:

1. What problems do you have right now during the project?
2. Could you describe please how the project team would perform ideally?
3. If some of the employees are underperforming, would you describe what they are not doing correctly?
4. Why do you think they are underperforming?... etc.

Example questions for the Lead Trainers:

1. How is the project you are working on going?
2. Are there things you are not satisfied with while working on this project?
3. What things would you change about this project?
4. Are there any things that you could do better?
5. What do you like about your current job?... etc.

All the interviews should be recorded and encoded. After the interviews, data analysis via coding should help to understand the perspective of stakeholders regarding the problem. The reports collected after all the Needs Assessment steps should be analyzed to come up with the list of possible causes and solutions.

Possible causes and solutions proposed

This section outlines the possible causes and solutions of a problem in non-filling the reports in time in the Digital Literacy Project Team. The real causes can be different depending on the real data collected based on the FEA Plan. However, based on the available information, these causes seem the most relevant:

Causes		Possible Solutions
Knowledge and skills	Lack of or limited skills and knowledge of the system	Training on the features of the system
Motivation and (dis)incentives	Absence of incentives or negative incentives given by CEO (accepting excuses)	Training for supervisor and CEO, change of policies and procedures
	Absence of motivation	Analyze expectancy and value for team members and propose proper motivational elements
Environment / obstacles	Heavy workload causing less time to be dedicated to this work	Reduce workload, job redesign, hire new people
	Absence of environment support or bad policies	Redesign policies and procedures, provide required equipment's

Table 4. Causes and Possible Solutions of the Performance Problems.

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