

# Need Assessment of Training Programs in Petrochemical Companies of Saudi Arabia

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## Abstract

The study analyzed the need assessment of the training program in Petrochemical companies in Saudi Arabia. The data was collected through distributing questionnaires to employees and managers of the companies who provided an insight into conduction of the training program. It was found through the study that there is a significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia. The study also revealed that all dimensions and all variables have reflected that the organizations require improving their respective training and development practices which would help achieve professionalism and effectiveness.

**Keywords: Need Assessment, Petrochemical Companies, Saudi Arabia and Training Program**

## Introduction

Human Resource (HR) is a key factor for production and hence for improved business performance. Still, in many organizations, the management of HR has not performed up to the expectations. Since most business organizations are spending billions of dollars on training programmes, evaluation of these programmes becomes inevitable. The human resource department and Trainers are continuously facing the pressure of justifying the intervention investment through results. So it is becoming important to evaluate the training session properly and demonstrating as well as communicating the worthwhile contribution of training efforts to the management (Tziner et al., 2007).

Employment training can be defined as “the systematic development of knowledge, skills, and attitudes required by an individual employee to perform adequately at the given task or job” (Chimote, 2010). It is broadly recognized that the training of workforces is the basis of most businesses’ employees’ improvement systems (Nordhaug, 1989), with contributions to organizational performance and productivity often given as the most prevailing dispute for justifying training expenditure (Bartlett & Kang, 2004). Certainly, the belief in a constructive relationship between worker’s development and training, and organizational efficiency, is widespread (Jacobs & Washington, 2003), since organizations that provide more training programmes for their

workers enable them as individuals to achieve more and consequently perform better organizational achievement.

The training evaluation approaches of a company are primary but the assessments of those needs and the measures put in place to achieve them also have to be considered. The Kirkpatrick model seems to imply that any measures of learning or job performance pre-course are not essential for determining programme effectiveness. Additionally, “because conclusions about training effectiveness are based solely on outcome measures, the model greatly reduces the number of variables with which training evaluators need to be concerned” (Bates, 2004). Undoubtedly Kirkpatrick’s model made very valuable contributions to the thinking and practice of training evaluation. It must not be forgotten that perhaps most significantly Kirkpatrick’s model promoted awareness of the importance of thinking about and assessing training in business terms (Wang, 2003). As noted previously, the Kirkpatrick Model consisted of four levels, these levels are reactions, learning, behaviour, and results. Kirkpatrick model had been considered the most prominent training evaluation model (Phillips, 2012).

In Petrochemical companies of Saudi Arabia, need assessment process serves as a diagnostic tool for determining what training needs to take place. Companies conduct survey which gathers data to determine what training needs to be developed to help employees, managers and the organization accomplish their goals and objectives. This analysis is performed by the managers who are able to observe their staff and make recommendations for training based on performance issues or gaps between performance and objectives. The Petrochemical companies also perform analysis on an organization-wide level by Training and Development managers who survey the organization to identify needs. Hence, need assessment in Petrochemical companies of Saudi Arabia looks at developing employee and organizational knowledge, skills, and abilities by identifying any gaps or areas of need. Once the training needs are identified, objectives are determined and developed which are required to be accomplished by the training. Hence, need assessment of training program forms criteria for measures of success and utility in Petrochemical companies of Saudi Arabia.

## Review of Literature

**Saleh Essam Kattuah (2013)** stated that Saudi Arabia is embarking on large scale training to bring its national workforce to international standards. The objective of the research was to investigate factors impeding employee training and thus career development of Saudis, and to recommend practices that lead to improved outcomes for the firms and the individuals. A qualitative study was used as the method for solving the research problem, using an interviewing technique to gather data. Qualitative data were obtained through semi-structured interviews using a purposive sample of human resource directors or training managers from 15 diverse large local and multinational Saudi-based organisations. The interview questions included the experiences and perceptions of senior managers regarding training outcomes for staff and their organisations.

The results of the analysis produced mixed findings. There was general agreement on the importance of training for organizational objectives; however, employer commitment to career development for staff did not emerge. Skills issues were in some cases secondary in individuals' access to training, which could be controlled by line management preferences. Conclusions from this study are that the education and employment authorities should consult with industry leaders to devise training courses within career frameworks. Under Nitaqat, managers could take awareness training regarding their firms' needs to improve Saudi competencies.

**Aliya Mohammed and Al-Mughairi (2015)** aimed to identify the training variables (pre-training interventions and activities, trainee readiness, training environment, training methods, trainer performance and behaviour, training content and objectives) and their effect on improving employee performance. In this study, training characteristics were referred to as pre-training interventions and activities, trainee readiness, training environment, training methods, trainer performance and behaviour, training content and objectives. To achieve the aim of this study, quantitative research was adopted. The study was conducted at three separate times (pre-training, immediately after completion and post-training 2-3 months). Structural equation model (AMOS) software is used to validate the research model. The findings indicated that pre-training intervention and practices were positively and significantly related to expectations of training outcomes, and only trainee readiness was found to be positively and significantly related to the expectations of training environment and expectations of trainer performance and behaviour. The result confirmed the positive and significant correlation between reaction and learning, and between behaviour and results. Moreover, the results indicated that training environment had a strong and positive impact on learning. Nevertheless, pre-training interventions and activities had an insignificant effect on expectations for the training outcomes. Further, the training characteristics, such as the training environment, training methods and trainer performance and behaviour had an insignificant impact on intention to transfer learning. The findings did not support that training characteristics had a moderating role on the relationship between training outcomes.

**Kassem, Mohamed (2018)** believed that assessment and evaluation were an essential and vital part of any education system. It was found that sometimes assessment methods in the EFL context did not provide a true scenario and thus it was not possible to assess the problems faced by the learners which in the long run affected the rationality of EFL teaching and learning practices. The researcher considered Kirkpatrick's four-level model consisting of the four steps – reaction, learning, behavior, and result to determine the applicability of this model in the EFL context. The study was conducted at Prince Sattam bin Abdul-Aziz University where English was taught as a core subject and the students had to develop a high level of competence in translation and communication skills. The main aim of the study was to determine the reason why the EFL learners had a low inclination in learning English and whether the current evaluation methods were sufficient to find the reasons and then suggest answers. It is noted that though several studies were conducted in the past to

determine the cause but none could give a solution. Hence, there was a need to design a structured and flexible evaluation system to meet EFL standards. The respondents of this study were instructors with TEFL experience and PSAU students. The entire institution was used to collect data on assessment practices and evaluation approaches used. An observation of the examination transcripts was used to determine the errors in the assessment practices that were followed by the instructors. After determining the problem, the Kirkpatrick assessment model was introduced providing all inputs to the instructors for implementing the methods. The results obtained were positive as it created a better learning environment. The model was recommended to be adopted in other universities as the findings were valid.

### **Objectives of the Study**

1. To analyze the need assessment of the training given to employees and managers in the select petrochemical companies in Saudi Arabia

### **Hypotheses of the Study**

#### **Hypothesis 1:**

H<sub>01</sub>: There is no significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia

H<sub>1</sub>: There is a significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia

### **Research Methodology**

The study evaluates the training practices using Kirkpatrick's model in the petrochemical companies in Saudi Arabia. The study covers data collected through a structured questionnaire distributed to 112 employees and 70 managers of the selected Petrochemical companies in Saudi Arabia. The responses are analyzed using SPSS and desired results are obtained. Descriptive statistics such as mean, standard deviation, and percentage were used and to test the evaluation of training programs through Kirkpatrick's model, One-Sample t-test was used.

## Data Analysis and Interpretation

### Analysis of Responses from Employees in Petrochemical Companies of Saudi Arabia

**Table 1: Need Assessment of Training Program**

	Focus Area	SA	A	N	DA	SD
1	Training program is organized based on prior need assessment	24 (21.4%)	56 (50.0%)	23 (20.5%)	9 (8.0%)	-
2	The management felt the need to conduct training program	25 (22.3%)	59 (52.7%)	20 (17.9%)	8 (7.1%)	-
3	The need assessment was done using data collection techniques such as questionnaire, interview, observation, etc.	28 (25.0%)	48 (42.9%)	25 (22.3%)	11 (9.8%)	-
4	The need assessment identified newly recruited officials to participate in the training program	19 (17.0%)	58 (51.8%)	32 (28.6%)	3 (2.7%)	-
5	The need assessment encouraged the existing senior officials to participate in the training program	33 (29.5%)	54 (48.2%)	22 (19.6%)	3 (2.7%)	-
6	The need for training addressed the gaps between current conditions and desired conditions in the organization	18 (16.1%)	59 (52.7%)	28 (25.0%)	7 (6.3%)	-

Source: Primary Source, Compiled by the Researcher

The table shows the need assessment of the training program in selected Saudi Petrochemical companies. 56 respondents (50%) agreed that the training program was organized based on prior need assessment. 59 respondents (52.7%) opined that the management felt the need to conduct training program. 48 respondents (42.9%) opined that the need assessment was done using data collection techniques such as questionnaire, interview, observation, etc. 58 respondents (51.8%) opined that the need assessment identified newly recruited officials to participate in the training program. 54 respondents (48.2%) stated that the need assessment encouraged the existing senior officials to participate in the training program. 59 respondents (52.7%) stated that the need for training addressed the gaps between current conditions and desired conditions in the organization.

**Analysis of Responses of Managers in Petrochemical Companies of Saudi Arabia****Table 2: Need Assessment of Training Program**

	<b>Need assessment</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>DA</b>	<b>SD</b>
1	Training program is organized based on prior need assessment	16 (22.9%)	31 (44.3%)	15 (21.4%)	8 (11.4%)	-
2	The management felt the need to conduct training program	9 (12.9%)	31 (44.3%)	25 (35.7%)	5 (7.1%)	-
3	The need assessment was done using data collection techniques such as questionnaire, interview, observation, etc.	14 (20.0%)	20 (28.6%)	24 (34.3%)	12 (17.1%)	-
4	The need assessment identified newly recruited officials to participate in the training program	10 (14.3%)	36 (51.4%)	22 (31.4%)	2 (2.9%)	-
5	The need assessment encouraged the existing senior officials to participate in the training program	26 (37.1%)	28 (40.0%)	12 (17.1%)	4 (5.7%)	-
6	The need for training addressed the gaps between current conditions and desired conditions in the organization	5 (7.1%)	43 (61.4%)	19 (27.1%)	3 (4.3%)	-

Source: Primary Source, Compiled by the Researcher

The table shows the need assessment of the training program in selected Saudi Petrochemical companies. 31 respondents (44.3%) agreed that the training program was organized based on prior need assessment. 31 respondents (44.3%) opined that the management felt the need to conduct training program. 20 respondents (28.6%) opined that the need assessment was done using data collection techniques such as questionnaire, interview, observation, etc. 36 respondents (51.4%) opined that the need assessment identified newly recruited officials to participate in the training program. 28 respondents (40%) stated that the need assessment encouraged the existing senior officials to participate in the training program. 43 respondents (61.4%) stated that the need for training addressed the gaps between current conditions and desired conditions in the organization.

**Testing of Hypotheses****Testing of First Hypotheses**

**H<sub>01</sub>: There is no significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia**

**H<sub>1</sub>: There is a significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia**

**Table 3: One-Sample Test**

	N	Mean	Std. Deviation	Std. Error Mean
<b>Need assessment of the training program</b>	222	3.132	.591	.0397

	Test Value = 3.5			
	t	df	Sig. (2-tailed)	Mean Difference
<b>Need assessment of the training program</b>	-8.373	221	.000	-0.368

Source: Primary Source, Output from SPSS

When one sample t test was performed to verify the influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia, taking 3.5 as standard, it was found that the observed mean of influence of need assessment on the training program was lesser than the expected mean. The observed mean for satisfaction was 3.132 as against expected mean of 3.5. 't' value of -8.373 was found to be significant at **.000 level**. In other words, there was a **significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia. Hence, the alternative hypothesis is accepted.**

### Conclusion

Many staff training programs related to employees of organizations are conducted each year. These programs consume organizational time and resources. Under these circumstances, it is important that managers selecting a particular training program are able to determine with some degree of certainty the likely impact of the training on staff and related outcomes. The study analyzed the need assessment of the training program in Petrochemical companies in Saudi Arabia. The data was collected through distributing questionnaires to employees and managers of the companies who provided an insight into conduction of the training program. It was found through the study that there is a significant influence of need assessment on the training program in Petrochemical Companies of Saudi Arabia.

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