

# Analysis Satisfaction Participant Training Oil and Gaz Safety Supervisors Use SERVQUAL and IPA

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## Abstract

Study This aim For become part from effort increase quality service to participants training Oil and Gas K3 supervisor at PT Tx with measure level satisfaction , As for the approach study This apply approach quantitative descriptive with method survey For know dimensions satisfaction participant training Amount participant training determined as many as 100 participants at once become respondents in study This . Data collected with use questionnaire . In this global era company must supported competent and reliable employees , considering source Power man own a very important role in support achievement excellence and success company . One of the good HR management strategies that is through attention company to productivity , education and training development employees to improve competence , so that employees own skill at a time dig the potential that exists within him .

**Keywords:** Quality, Satisfaction, Participants, Training

## Abstract

*This research aims to be part of an effort to improve the quality of service for K3 Oil and Gas supervisor training participants at PT Tx by measuring the level of satisfaction. This research approach applies a descriptive quantitative approach with a survey method to determine the dimensions of training participant satisfaction. The number of training participants was determined to be 100 participants who were also respondents in this research. Data was collected using a questionnaire. In this global era, companies must be supported by competent and reliable employees, considering that human resources have a very important role in supporting the company's achievement of excellence and success. One good HR management strategy is through the company's attention to productivity, education and employee development training in order to increase competence, so that employees have skills and explore their potential.*

**Keywords:** Quality, Satisfaction, Participants, Training

## INTRODUCTION

Training refers to efforts planned company For facilitate learning competencies , knowledge , skills , and related behaviors with work employees , which aims to ensure that employees control knowledge , skills , and behaviors that are emphasized in training and implementing it in activity everyday (Noe, 2020). Training Oil and Gas K3 Supervisor at PT Tx during This walk with sufficient intensity high , with variation criteria different participants . Differences criteria participants who took part cause emergence obstacles to implementation training and certification , there is also difference background behind education participants , then need existence adjustment about topic discussion For ensure return the scope of the training program that refers to the SKKNI remains can filled by participants , because position Oil and Gas K3 supervisor is important in system program implementation K3 management in industry mentioned . Its role influential to walking cycle or *framework* system management that is implemented , starting from stages planning until stage improvement performance in organization .

In every training always related with quality service (*Service Quality*) training and satisfaction participant training especially during the learning process ongoing . For Certification Services companies important For do measurement level satisfaction participant to quality service implementation training , at the same time identify attribute quality services that can made into as priority For get repair use approach *Importance Performance Analysis* (IPA). The IPA method was first introduced by Martilla and James in 1977 , IPA aims to... For measure connection between perception consumers and priorities improvement quality products / services also known as *quadrant analysis* ( Repi , Massie, & Soegoto , 2014).

In doing gap analysis , used technique analyze quadrant or Cartesian Diagram or normal called *Importance Performance Analysis* ( Supranto , 2011) The interpretation from quadrant the is as following :

- A. Top Priority ( *Concentrate here* ) in the quadrant This there is factors that are considered important and equal expected customer will but performance company assessed Not yet satisfying so that party company need concentrate For allocate source its power to increase performance that falls into the quadrant This .
- B. Keep it up achievement ( *Keep up the good* ) in the quadrant This there is factors that are considered important and or expected as factor support satisfaction customer so that company must For maintain performance performance the .
- C. Priority Low ( *Low priority* ) in the quadrant This there is factors that are considered have level perception or level low actual or No too important and or No too expected by customers so that company No need prioritize or give attention more to factors the .
- D. Possibly *overkill* in any quadrant This there is factors that are considered No too important and not too considered by the company more Good allocate source power related to factors the to other factors that have level higher priority tall .

In the method This required measurement level suitability For know how much big customer feel satisfied to performance company , and how much big party provider service understand what is desired customer to the services they provide give (Setiawan, 2007).

Quality model service *servqual* ( *Service Quality* ) was developed by (Berry & Zeithaml, 1985), in a series study they to six sector services , namely : repairs equipment House stairs , cards credit , insurance , donations telephone interlocal , banking retail , and brokers securities . *servqual* concluded that there are five dimensions principal , as following :

1. *Tangible* ( evidence) physical ) is in the form of facility physique office ( condition building office ), space wait / work , counter service , spatial planning office ) tools equipment work (computer), machine photocopies and others), number employee who gives services and tools communication ( telephone , pax, board announcement / information suggestion box and others).

2. *Reliability* is the ability to provide services in a trustworthy, accurate, consistent manner and in accordance with expectations.
3. *Responsiveness* is the desire to help service applicants and provide service quickly.
4. *Assurance* is the knowledge and courtesy of service providers, and their ability to provide trust and confidence to service applicants.
5. *Empathy* is giving full attention to service applicants or giving sincere, selfless attention to service applicants.

From the background as explained above, the problem formulation for this research can be made as follows :

1. How high is the level of participant satisfaction with the quality of service for implementing the oil and gas K3 supervisor training provided by PT Tx?
2. What service quality attributes can be prioritized for improvement?
3. What are the proposed improvements generated by using the IPA approach to improve service quality?

## **METHOD**

This descriptive quantitative research was conducted at PT.Tx, starting from August 2024 to September 2025. The main data obtained for this study were collected through direct survey assessments of oil and gas K3 supervisor certification participants at PT. Tx, the sample size of which was determined using the *Slovin method* , to fill out the questionnaire form, namely by sharing links through training participant contacts and a literature review was conducted to obtain information outside of existing research in the field, including books, journals, and other related materials. This includes SERVQUAL data processing, GAP calculations, IPA analysis, and recommendations for measuring participant satisfaction.

Satisfaction consumer is one of the gauge measuring success for company in field goods and services , with objective guard quality in the Company's field education and training. Concept in satisfaction consumer in field education is satisfaction participant happen from evaluation experience they from service education obtained , Elliot and Healy ( in (Salim, Pradiani, & Fathorrahman , 2021 )) with using indicator *Tangible, Empathy, Reability , Responsiveness, Assurance*.

In research This use technique analysis quantitative descriptive that is research conducted For know mark variables independent , good One variables or more ( independent ) without make comparison , or connect with other variables . Validity test done For know accuracy from each question on the questionnaire that has been distributed . In measuring validity used tool in the form of SPSS software . Reliability Test used For know level reliability from each question on the questionnaire . *Servqual* method used For analyze data in study This is the Servqual method. intended For measure quality service with gap hope customer with Fact customer

## **RESULTS AND DISCUSSION**

Research data This obtained through questionnaire ( survey ) containing

question or statement written submission to respondents ( participants) training oil and gas K3 supervisor )

**Table 1.** Validity Test Results

Variable	Factor	Rhitung		Rtable	Information
		Hope	Perception		
Tangibles	1	0.468	0.511	0.196	Valid
	2	0.346	0.671	0.196	Valid
	3	0.615	0.586	0.196	Valid
	4	0.775	0.615	0.196	Valid
	5	0.775	0.661	0.196	Valid
	6	0.575	0.394	0.196	Valid
	7	0.572	0.573	0.196	Valid
	8	0.528	0.590	0.196	Valid
Reliability	9	0.514	0.821	0.196	Valid
	10	0.441	0.821	0.196	Valid
	11	0.631	0.737	0.196	Valid
	12	0.842	0.790	0.196	Valid
	13	0.842	0.790	0.196	Valid
Responsiveness	14	0.831	0.512	0.196	Valid
	15	0.594	0.779	0.196	Valid
	16	0.782	0.753	0.196	Valid
	17	0.576	0.775	0.196	Valid
Assurance	18	0.771	0.564	0.196	Valid
	19	0.811	0.629	0.196	Valid
	20	0.819	0.746	0.196	Valid
	21	0.790	0.661	0.196	Valid
	22	0.744	0.467	0.196	Valid
	23	0.620	0.646	0.196	Valid
	24	0.653	0.612	0.196	Valid
	25	0.634	0.520	0.196	Valid
	26	0.602	0.520	0.196	Valid
Empathy	27	0.756	0.799	0.196	Valid
	28	0.862	0.826	0.196	Valid
	29	0.751	0.724	0.196	Valid
	30	0.676	0.728	0.196	Valid

Based on the table above , it is obtained mark rhitung from all items on validity > rtable , then grains instrument study the declared valid

**Table 2.** Reliability Test Results

Variables	Cronbach's Alpha		Information
	Hope	Perception	
Tangible	0.736	0.692	Reliable
Reliability	0.694	0.850	Reliable
Responsiveness	0.636	0.672	Reliable
Assurance	0.882	0.755	Reliable
Empathy	0.753	0.754	Reliable

Based on Table 4.2 above , it is known that that answers respondents from variables study *reliable* , with thus questionnaire can used For study next . This matter obtained from acquisition mark *Cronbach's Alpha*.

**Table 3.** Analysis Results Servqual

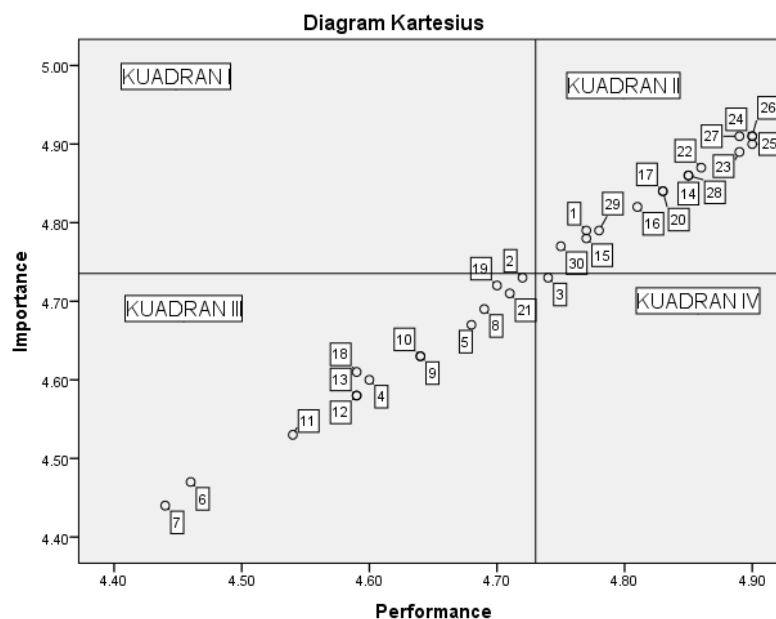
Indicator	Perception	Hope	GAP	Information
Are the classroom equipment facilities and materials (Projector, Lights, AC, Whiteboard, Chairs and Study Tables)	4.77	4.89	-0.12	Negative
Amount adequate stationery and handbook facilities	4.72	4.88	-0.16	Negative
Availability appropriate number of trainers with amount participant	4.74	4.84	-0.10	Negative
Clean and adequate worship facilities	4.6	4.6	0	Equals 0
Availability land parking	4.68	4.6	0.08	Positive
Availability and cleanliness of toilets	4.46	4.8	-0.34	Negative
The training place or location is not noisy	4.44	4.78	-0.34	Negative
Lighting and temperature of the training area are according to standards	4.69	4.83	-0.14	Negative
Reliability of training providers or trainers in using training facilities (Projectors, Laptops and training support applications)	4.64	4.89	-.026	Negative
Series the material provided quality in accordance with program targets and current developments	4.64	4.88	-0.24	Negative
Instructor control material training	4.54	4.84	-0.3	Negative
The instructor controls the situation during training.	4.59	4.6	-0.01	Negative
Accuracy time presence staff and instructors provider training	4.85	4.81	0.04	Positive
Alertness of staff and instructors provider training in fulfil need participant training	4.77	4.94	-0.17	Negative
Alertness of staff and instructors provider training in respond question or complaint participant	4.81	4.89	-0.08	Negative
Instructor or provider training capable give accurate and clear information	4.83	4.93	-0.1	Negative
Discipline time organizer training	4.59	4.86	-0.27	Negative
Discipline time meal and coffee break	4.7	4.86	-0.16	Negative
The quality and standard of the menu and variety of snack or food dishes	4.83	4.83	0	Equals 0

Security facilities and buildings training	4.71	4.83	-0.12	Negative
Feeling safe and comfortable during training	4.86	4.83	0.03	Positive
Consistent to regulations that have been set	4.89	4.92	-0.03	Negative
Instructor or provider training own expected capabilities in accordance with standard company	4.9	4.94	-0.04	Negative
Availability of training procurement information prior to training implementation	4.9	4.9	0	Equals 0
Instructors and providers training behave educate and protect to participant	4.9	4.92	-0.02	Negative
Staff and instructor capabilities communicate with participant	4.89	4.88	0.01	Positive
Availability time ask answer	4.85	4.86	-0.01	Negative
Politeness and friendliness of staff and instructors in answer or respond participant	4.78	4.79	-0.01	Negative
Complaints and suggestions responded to with Good	4.75	4.86	-0.11	Negative
Average	4.73	4.83	-0.09	Negative

Based on analysis table results above, obtained results indicator quality which services have been fulfil hope participants / respondents at a time know necessary indicators repaired by PT Tx because Not yet fulfil hope participants / respondents, even on the average results of the indicators Still has a negative gap.

Evaluation respondents to variables *tangibles*, *Reliability*, *Responsiveness*, *Assurance*, *Empathy* based on average assessment value respondents, where mark hope more tall compared to mark perception. These results possible Because a number of factor reason that is about location inadequate PT Tx training conducive from emergence voice noise that arises consequence from location nearby PT Tx training with track train fire, so that often found leakage voice until into the location training, about mastery material by resource persons / instructors remember background background education and style demeanor material during class training the progress is also different, the factors like Operational staff alertness in give service while inside session training, the information provided by the instructor is lacking complete and responsive instructor in respond question participants, such as PT Tx is lacking provide a time limit / *rundown* for discipline implementation training and variety of food menus served to participant training, and factors like Not yet existence facility documentation For respond complaint and suggestions from participant prescribed training.

**Figure 1**  
**Importance and Performance Analysis (IPA) Results**



**Table 4.** Points Cut Each Indicator And IPA Intersection Point

Quadrant	Indicator
I	-
II	26. Instructors and providers training behave educate and protect to participant
	24. Instructor or provider training own expected capabilities in accordance with standard company
	25. Availability of training procurement information before training implementation
	27. Staff and instructor capabilities communicate with participant
	23. Consistent to regulations that have been set
	22. Feeling safe and comfortable during training
	28. Availability time ask answer
	14. Accuracy time presence staff and instructors provider training
	17. Instructor or provider training capable give accurate and clear information
	20. The quality and standard of the menu and variety of snack or food dishes
	16. Alertness of staff and instructors provider training in respond question or complaint participant
29. Politeness and friendliness of staff and instructors in answer or respond participant	
1. What are the classroom equipment facilities and materials (projector, lights, air conditioning, whiteboard, chairs and study tables)?	

	15. Alertness of staff and instructors provider training in fulfil need participant training
	30. Complaints and suggestions responded to with Good
III	7. The training place or location is not noisy.
	6. Availability and cleanliness
	11. Instructor control material training
	12. The instructor controls the situation during training.
	13. Appropriateness of teaching techniques and methods (discussions, interesting simulations and according to the needs of the topic or characteristics)
	14. Accuracy time presence staff and instructors provider training
	18. Discipline time organizer training
	9. Reliability of the training provider or trainer in using training facilities (Projector, Laptop and training support applications)
	10. Series the material provided quality in accordance with program targets and current developments
	5. Availability land parking
	8. Lighting and temperature of the training area are according to standards.
	21. Security facilities and buildings training
	19. Discipline time meal and <i>coffee break</i>
IV	2. Amount adequate stationery and handbook facilities
	3. Availability appropriate number of trainers with amount participant

### 1. Quadrant I

Quadrant I is the area that contains factors considered not enough important and in fact its performance No too special . Improvement variables included in quadrant This can considered return Because its influence to The benefits felt by respondents were very small . Not found indicators included in category quadrant 1 on respondents / participants training oil and gas K3 supervisor at PT Tx.

### 2. Quadrant II

Quadrant II is the area that contains factors considered important by customers , but in reality factors This Not yet in accordance with what the customer expect ( level satisfaction obtained Still low ). The variables that enter quadrant This must be improved . Improve it that is with method company do repair in a way Keep going continuously so that *performance* existing variables in quadrant This will increased too.

### 3. Quadrant III

Quadrant III is the area that contains factors considered importance by customers and factors considered by customers Already in accordance with what he feels so that level his satisfaction *relatively* more high . The variables

that enter in quadrant This must still maintained Because all variables This make products / services the superior in the eyes customer .

#### 4. Quadrant IV

Quadrant IV is the area that contains factors considered not enough important by respondents and felt too excessive from context implementation .

### DISCUSSION

In the research This method data collection , namely primary data collection , namely data obtained in a way direct from respondents with method research or research field use questionnaire . Number respondents in study This totaling 100 respondents from participant training oil and gas K3 supervisor . Extraction techniques samples used in study This is *incidental sampling* is the process of taking samples taken in a way random without paying attention to certain strata .

Furthermore discussed related results from study with title Satisfaction participant training oil and gas K3 supervisor with method *Servqual* and *IPA* with see satisfaction known consumers from evaluation on the variables tangibles, reliability, responsiveness, assurance and empathy.

Evaluation respondents to variables *tangibles* , based on average assessment value respondents , where mark hope more tall compared to mark perception . This is prove that satisfaction consumer will quality service from PT Tx in variables *tangible* still Not yet adequate . This result possible Because a number of factor reason that is about location inadequate PT Tx training conducive from emergence voice noise that arises consequence from location nearby PT Tx training with track train fire , so that often found leakage voice until into the location training .

Furthermore Evaluation respondents to variables *reliability* , based on average assessment value respondents , where mark hope more tall compared to with mark perception . This appears on the indicator about mastery material by resource persons / instructors remember background behind education and style demeanor material during class training taking place is also different .

Evaluation respondents to variables *responsiveness* , based on mark average rating respondents , where mark hope more tall compared to with mark perception , thing This prove that quality services at PT Tx in variables *responsiveness* yet fulfil satisfaction consumers . This caused by various factor like Operational staff alertness in give service while inside session training , the information provided by the instructor is lacking complete and responsive instructor in respond question participant .

Evaluation respondents on the *assurance* variable , based on average assessment value respondents , where mark hope more tall compared to mark perception in matter This quality PT Tx services in variables *assurance* not yet fulfil satisfaction participants . This is caused by Because various factor like PT Tx is lacking give a time limit For discipline implementation training , variety of food menus served to participant training .

Whereas evaluation respondents to variables *empathy*, based on average assessment value respondents, where mark hope more tall compared to

Perception value. This proves that the quality of service in the *empathy variable* has not met participant satisfaction due to factors such as the lack of documentation facilities to respond to complaints and suggestions from training participants.

The results of this study indicate that PT Tx's service quality has not been able to meet participant expectations. This is evidenced by the results of the GAP test analysis, which shows that none of the five dimensions of service quality assessment variables meet participant satisfaction. This proves that PT Tx needs to make improvements and enhancements related to service quality. In this case, customer satisfaction and service quality are interrelated according to the results of research by Meirejeki, Nurjaya, Darlina, & Wahyuni (2020), which states that service quality is an important attribute for maintaining customer breadth. Because good service will attract many consumers and can survive in a competitive market.

## **CONCLUSION**

Based on the data analysis and discussion that has been presented, the satisfaction of participants in the oil and gas K3 supervisor training at PT Tx which has been tested on 100 respondents / participants is classified as low, because there are still many indicators that indicate the need to improve the quality of services provided, especially in quadrant II. Based on the facts in the field, the implementation of training at PT Tx already has a *standard operating procedure* that accommodates the indicators tested. To improve and increase the quality of service to meet consumer satisfaction, it is necessary to improve PT Tx's internal problems. Based on the results of the IPA analysis, it is known that the indicators that need to be improved are those in quadrant II. Thus, there needs to be an improvement in these indicators to improve the quality of service such as the need for competent instructors who can be trusted by participants, staff who have good communication, the quality and quantity of the menu and variety of snack and food dishes. However, based on the results of the study, the majority of indicators in service quality are in quadrant III, the variables that enter this quadrant must be maintained because all of these variables make PT Tx superior in the eyes of participants such as a comfortable and clean location, discipline in training time and other adequate facilities.

## **Limitations**

This research was only conducted on oil and gas K3 supervisor training participants in the period August 2024 – February 2025.

## **Research Implications**

Suggestions that can be expressed by the author include:

1. Conduct periodic reviews and performance improvements on the quality

management system that has been built.

2. Establish work instructions and validate the documentation process for implementing work training by supervisors of each work department.
3. Maintaining the quality of training indicators and improving the quality of training implementation documentation in accordance with the results of science testing with the principles of *Plan, Do, Check, Action*

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