CHECK SHEETS (LISTS)

Category: Monitoring - Control

ABSTRACT

As one of Ishikawa's basic quality tools, Check Sheets[G] are an effective means of gathering data in a helpful, meaningful way. They are easy to use and allow the user to collect data in a systematic and organized manner. Many types of check sheets are available. The most common are the defective item, defective location, defective cause, and checkup confirmation check sheets.

KEYWORDS

Check sheets, Check lists, Data collection, TQM tool, Seven Basic Tools of Quality, Statistical Process Control

OBJECTIVES

The main objectives of the check lists are:

- Clearly identify what is being observed.

- Keep the data collection process as easy as possible.

- Group the data. Collected data should be grouped in a way that makes the data valuable and reliable. Similar problems must be in similar groups.

- Create a format that will give the most information with the least amount of effort.

FIELD OF APPLICATION

The checklist could be used for:

- Gathering and structuring data

- Verifying a hypothesis

RELATED TOOLS

Pareto charts, Brainstorming, Fishbone diagram, Inspection sheets, Control Chart, Scatter diagrams

A check sheet is one of the seven basic quality tools. Data collection can often become an unstructured and messy exercise. It is a simple form data could be collected in an organized manner and easily converted it into readily useful information. Data collection is important because it is the starting point for statistical analysis. The function of a check sheet is to present information in an efficient, graphical format. A check sheet is a table or a form used to systematically register data as it is collected. Check sheets help organize data by category. They show how many times each particular value occurs, and their information is increasingly helpful as more data are collected. Main applications of a check sheets include registering how often different problems occur and registering the frequency of incidents that are believed to cause problems.

There are many types of check sheets:

- Distribution Check Sheets, used to collect data in order to determine how a variable is dispersed within an area of possible occurrences

- Location Check Sheets, used to Highlight the physical location of a problem/defect [G] in order to improve quality

- Cause Check Sheets, used to keep track of how often a problem happens or records the cause to a certain problem.

- Classification Check Sheets, Used to keep track of the frequency of major classifications involving the delivery of products or services

The main steps to construct a check sheet are:

1. Clearly define the objective of the data collection.

2. Determine other information about the source of the data that should be recorded, such as shift, date, or working point.

3. Determine and define all categories of data to be collected.

4. Determine the time period for data collection and who will collect the data.

5. Determine how instructions will be given to those involved in data collection.

6. Design a check sheet by listing categories to be counted.

7. Pilot the check sheet to determine ease of use and reliability of results.

8. Modify the check sheet based on results of the pilot.

BENEFITS

- Effective way of displaying data

- Easy to use

- Can identify the root cause of a problem

- A first step in the construction of other graphical tools

- Provides a structure for uniform data collection

- Can be used to substantiate or refute allegations

PREREQUISITES

- Use Ishikawa diagrams or Brainstorming to determine categories to be used on the check sheet.

- Construct an operational definition of each category to ensure data collected is consistent.

- Spend adequate time explaining the objective of the data collection to those involved in recording the data to ensure the data will be reliable.

EXAMPLES – CASE STUDY

In order to understand the operation mode of the check sheet tool and in order to emphasize the results obtained by using this tool, we will take the following situation as an example:

A medical policlinic has four areas for patients' diagnostics: Area A, Area B, Area C, and Area D. At the end of month inspection, many errors are discovered in the invoicing process at the four diagnostics points. In order to investigate the types of errors on the invoices received through the four points, the following check sheet is drawn up.

Table 1: Check sheet designed to investigate the types of errors in the received invoices

		AREAS				Total
		AREA A	**AREA B**	**AREA C**	**AREA D**	
ERRORS	**Transaction datas not mentioned**	///////	///			**10**
	Supplier name inegible or not mentioned	///	/////	/		**9**
	Supplier VAT number (fiscal ID) omitted	//	/	//		**5**
	Company datas erroneous or omitted	//	/	/		**4**
	Invoice not duly signed by buyer	//////	////		//	**12**
	Invoice date not mentioned	/	////		/	**6**
	Invoice number not mentioned	////////	///	//		**13**

The check sheet easily reveals the most frequent errors (Invoice number not mentioned, Invoice not duly signed by buyer, Transaction datas not mentioned, etc.) and the areas where the greatest number of errors occurred (areas A, and B respectively).

BIBLIOGRAPHY

1. Bunney, Heather and Barrie Dale. TQM blueprint. Blackwell Publishers, Oxford, 1999.

2. Foster, Thomas. Managing Quality, An Integrative Approach. Upper Saddle River, Prentice Hall, 2001.

3. *"Guidelines for the Planning of Health Programme Evaluation"* Swiss Federal Office of Public Health, Berne Switzerland, 1997 (available on www.health-evaluation.admin.ch)

4. Hodgetts, Richard M. Measures of Quality and High Performance. Amacom publishing, New York, 1998. Pages 89-91.

5. Owen, Jane, Making Quality sense: A guide to quality tools and techniques, awards and the thinking behind them, Learning and Skills development

agency, London, 2002
http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/5b/92.pdf

6. Soin, Sarv Singh. TQC essentials. McGraw-Hill, Inc: New York, 1992. Page 297.