

# Quality Circle: An Effective Tool for Improvement Employees Performance

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**Abstract:** Quality circle is a tool for increase employees performance and linking workers to the process of decision making. It consists of small group of workers from all levels of the organizational structure. The main purpose of circle is that every worker desires to take participate in making the environment of organizational a better place to work .The present study focus on quality circle and its seven basic tools .

**Keywords:** Quality circle, Employees, Tools.

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## 1. CONCEPT AND DEFINITION OF QUALITY CIRCLE

The concept of quality circle is encouraging employee participation, attitude, develop team work in spirit and motivate employees to give contribution towards through group process.

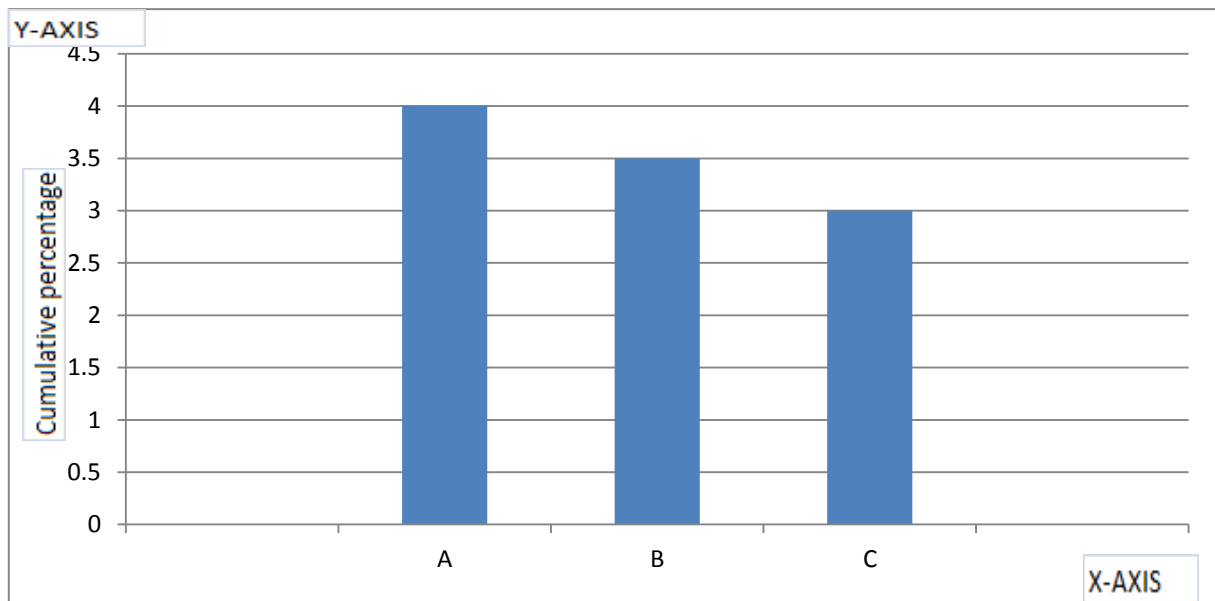
“Quality circle is a small group of employees from the same work area who voluntarily meet on a regular basis to identify ,examine and solve work related problem ”.This concept was first established in Japan 1962 by Prof . Kaoru Ishikawa. Normally seven to twelve volunteers from the same organization make up a circle. The members of circle take knowledge through a training programme, problem solving session and group discussion.

## 2. SEVEN BASIC TOOLS

The seven tools were developed by Prof. Kaoru Ishikawa these tools are the basic fundamental means of achieving quality improvement and fundamental instrument to improve product quality these tools are basic to monitoring and improvement activities at the process level these are used in analyze data for variation.

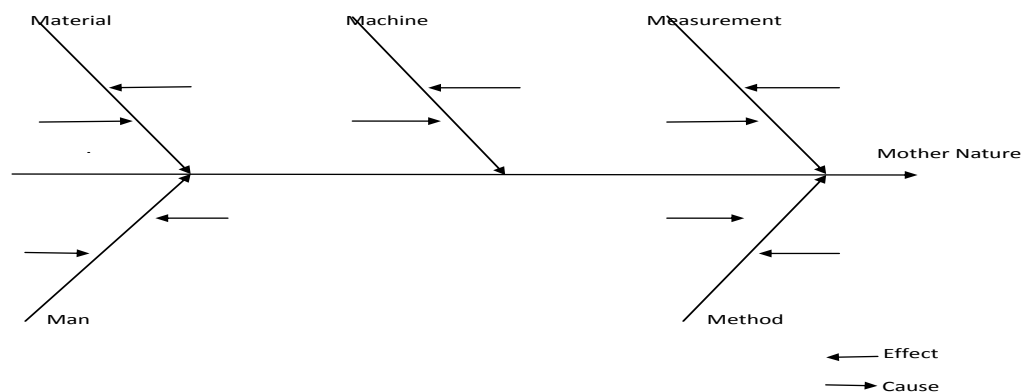
1. Pareto - chart
2. Cause - effect diagram
3. Check sheet
4. Histogram
5. Scatter diagram
6. Control chart
7. Graphs

**1. Pareto – chart:** - It is also known as “ABC analysis”. It can summarize all data types of chart contains both bar and lines. Individual values are represented in descending order by bar and cumulative is shown by the line. It is a statistical technique in decision making used for chooses of a limited number of tasks which produce significant overall effect.



**2. Cause and effect:** - The cause and effect diagram also as the “fish bone diagram or the ishikawa diagram “was developed by kaoru ishikawa in 1982 to identify root causes to a problem. This diagram is helpful to search all the powerful causes that result of output powerful causes means any of the 6 (M s), 8 (P s), 4(S s).

6M’s- machines, methods, material, maintenance man and Mother Nature.

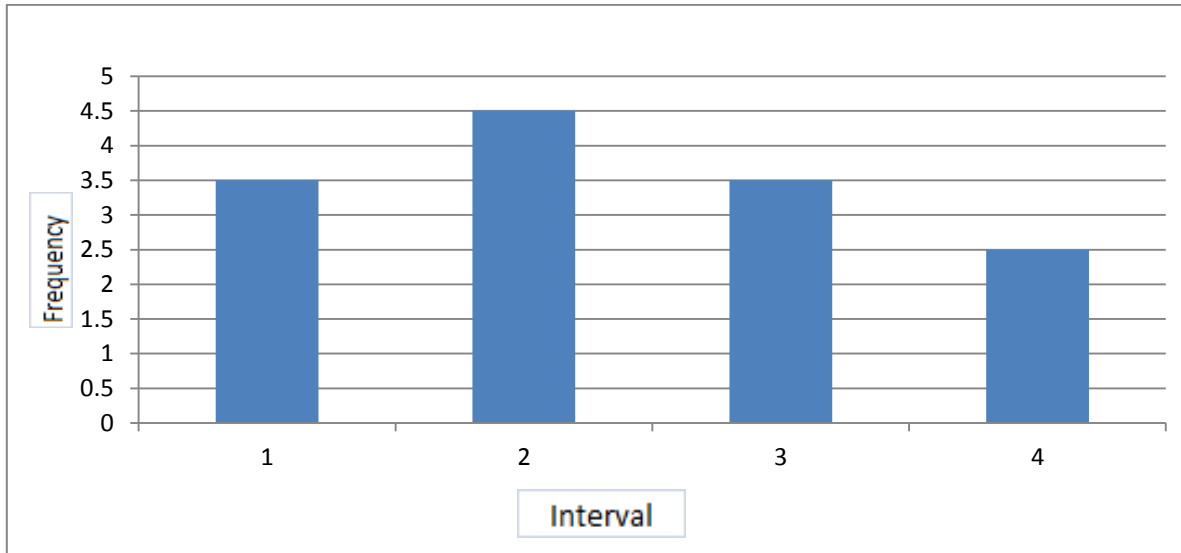


Cause-and-Effect Diagram

**3 .Check sheet:** - Check sheet is also called as “defect concentration or tally sheet ‘’. In check sheet information is present in graphical format it is used when data can be collected repeatedly by the same person and in a production process.

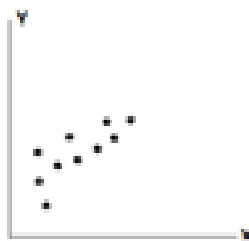
Object	Month				Total
	January	February	March	April	
A	4	-	-	-	4
B	-	-	-	-	0
C	-	-	-	-	0
D	-	-	-	-	0
Total	4	0	0	0	4

**4. Histogram:** - Histogram is used to show frequency distribution it gave simplest way to examine the distribution of data. Every column in a histogram show a certain measurement it is used to plot the density of data show the nature of the distribution of data, average and variability in histogram high bar show more point in a class and a low bar show fewer point. If the bar in bell curve histogram show normal position and if it is not normal position it may take different shapes this is based on the condition of distribution. From the help of Histogram Company know relative frequency of occurrence for data value and they can be used to show large amount of data and also be show variation in the data value.

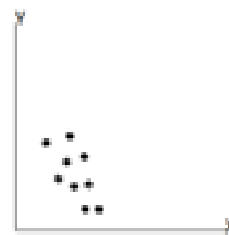


Histogram

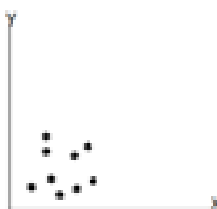
**5. Scatter diagram:** - A scatter diagram is useful tool to show relationship between variables and independent variables. Through scatter diagram find variables are related or not if they are attached by controlling the independent variables the dependent variables are also controlled and if the variables are correlated points fall along a line or curve.



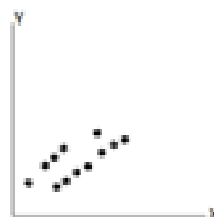
Positive Correlation



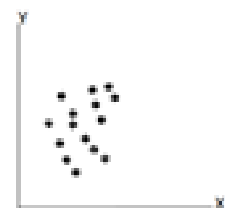
Negative Correlation



No Correlation



Strong Positive Correlation



Weak Negative Correlation

**6. Control chart:** - Control chart is firstly described by Walter A. showhort. It shows the range of variability in this type the data is prepared on the basis of statistical sampling theory. If the process is stable there is no need of correction or change in process. Control chart can help to determine variation.

Type of control chart

(a) Chart of Variables

(b) Chart of Attributes

**7. Graph:** - Graph is used to depending on the shapes and purpose of analysis. Through graph information is present in the pictorial form and show with the help of point, lines, shades etc. Bar graph show value in parallel bars ,line graph show variation over a period of time .Circle graph show breakdown of values and radar chart indicate analysis of examine items .

### 3. TOOLS AND THEIR USES

Tools	Use
Pareto chart	For analyse
Cause and effect diagram	For analyse
Check sheet	For analyse
Histogram	Determine frequency distribution
Scatter diagram	For analyse
Control chart	For control
Graph	For analyse

### 4. CONCLUSION

Prof. Karou Ishikawa is the father of quality circle he propose advantage of quality circle this concept were first use in Japan and further grow to all organization in over the world. It can say that quality circle emphasis on employee's participation as well as develop team work thinking and motivates employees to achieve desired result through group processes.

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