

# Quality Education News

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Hiroshima in 1945



Hiroshima in 2017

## From the ashes to world-class Quality

### Dear Supporter of Quality Education

There are moments in history that change history. On 6 August 1945 the United States dropped the world's first atomic bomb on the Japanese city of Hiroshima. There were 70,000 deaths as a direct result. Over time, an estimated further 90,000 to 166,000 died from related diseases. Three days after Hiroshima, the Americans dropped another bomb on Nagasaki. Japan offered unconditional surrender.

If you look at the left photo on this page, you can see the devastation caused by the bomb. The dropped bomb and the resultant uncontrolled fires turned the city into a wasteland.

At the end of the war, almost the entire of Japan was on the verge of starvation. More than 80% of the industrial facilities had been destroyed and industrial production had dropped to about 10% of the pre-war level.

Look at the second photo. You'll recognise the one damaged building that was in the first picture. That building has remained unaltered for more than 70 years. It's a stark reminder of a devastating time in Japanese history. Yet look at the rest of the photo. Surrounding that destroyed structure are modern high-rise buildings. Hiroshima, and indeed the whole of Japan, has risen from those atomic ashes. What brought about the transformation?

The United States – the victors over Japan – made a decision at the end of the war. It would help Japan recover. General Douglas MacArthur took charge of a plan that later became known as the Marshall Plan. The plan included millions of dollars of funding but also the expertise of quality management experts.

It's to be remembered that the United States was also then the most successful industrialised nation in the world. Many of their

businesses focussed on quality planning and implementation. The most famous American quality expert to visit Japan and be given a hero's welcome was W Edwards Deming. He's often regarded as the pre-eminent authority on quality management. In 1993 he died. (Almost 25 years later, the most prestigious award in Japanese industry is still the Deming Award.)

Japanese business and industry leaders were attentive listeners to the Quality gurus' messages. They adopted and adapted Quality tools and techniques that were shown to them. By so doing, they improved many aspects of society besides business and industry. Education and health-care were improved too.

Not only did the Quality approach impact positively on the Japanese nation but on citizens across the world. Their management systems and products are seen world-wide. A single example is the motor car. If you personally drive a vehicle such as a Honda, Isuzu, Nissan or Toyota, you're driving a vehicle that is the end product in many aspects of Quality tools and techniques.

In a way, South Africa today is also rising from the ashes of its past history. Much has been achieved since 1994 but much more still needs to be done. By using Quality techniques and tools – of which six are briefly described in this newsletter – improvements will undoubtedly happen. Let's continue raising our education system from the ashes.

Sincerely

*Richard Hayward*

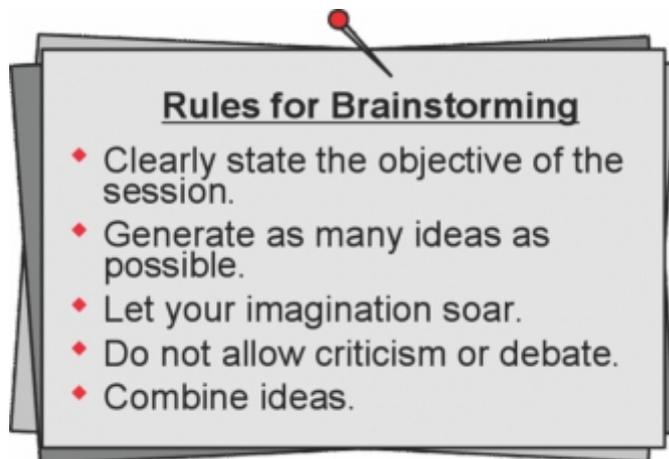
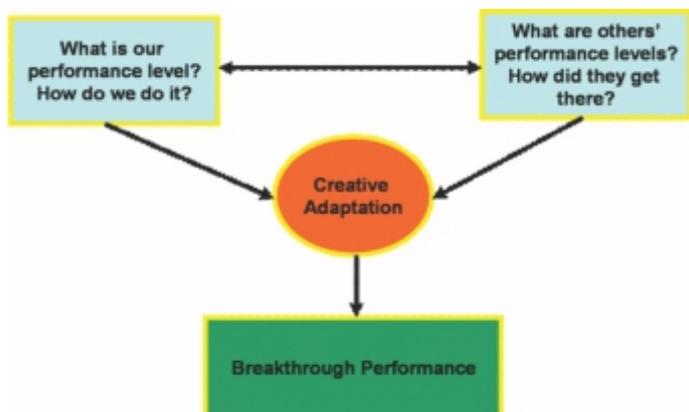


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EVERY SWIPE COUNTS

W Edwards Deming's mantra around Quality was, "continual never-ending improvement". He believed that no matter how hard a person or organisation tried, perfect quality would never be fully achieved. Yet the Quality goal is to get better and better bit by bit. The quality improvement process is often referred to as a journey rather than a destination. One's always "on the road" trying to reach that ever-elusive final destination of perfection.



## 1 Benchmarking

As teachers, we "benchmark" often even if we don't use the quality management jargon. You might, for example, be invited to take a team that you coach to an inter-schools sports meeting. During the sports meeting, you'll compare the performance of your team as against that of teams from other schools.

You'll notice tactics on the field of play used by opposing schools. In conversations with other coaches, you might pick up good coaching tips that you can use in the future. The opposite might happen too; others could be turning to you for coaching advice.

Benchmarking is simply seeing, reading and understanding what others are doing so as to improve your own performance.

In benchmarking, three core questions are asked:

1. What is the other person, team or school doing **worse** than us?
2. What is the other person, team or school doing **about the same** as us?
3. What is the other person, team or school doing **better** than us?

Answer these three questions and you're at the creative adaptation point on what needs to be done to take your team or whatever you're trying to improve, to higher levels of quality.



## 2 Brainstorming

This quality management technique is also often used by teachers without using the actual management jargon. Think of those times when teachers are sitting around a table trying to think of ways to raise money for a school project. Everybody's making suggestions. That's brainstorming.

The above rules will help in having a worthwhile brainstorming session. One suggestion is not to have too long a session. Ten or fifteen minutes is enough. Then start grouping similar ideas together. Also, decide whether the session is **structured** or **unstructured**. In the structured format, the facilitator goes around the room asking for ideas from each person. The unstructured format invites input from anyone in no particular order.

In almost every group there will be the introverts – those who feel uncomfortable having to speak to a large audience. Also, they don't want to be rushed into give their input; they want time for reflection before having to give their suggestions. So often the introverts' ideas are of great value. A way to deal with the matter is to have a few minutes for everyone to write down their ideas. Afterwards, invite ideas. The introverts' contributions will more likely be heard.

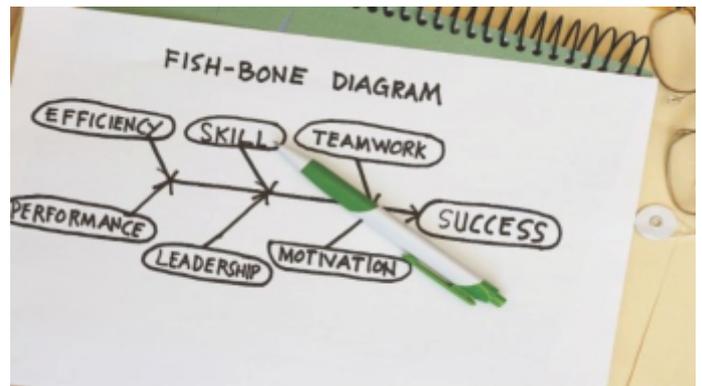
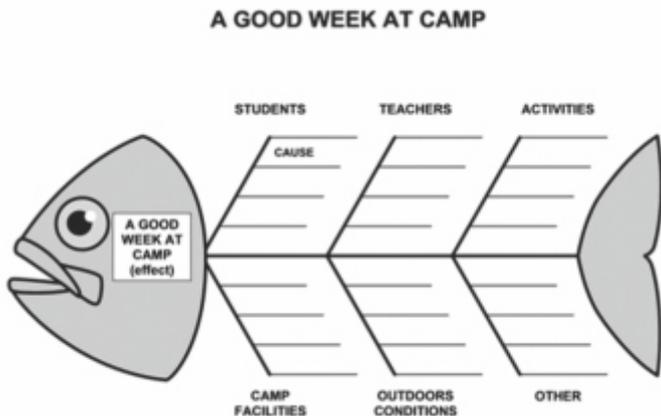


### 3 Fishbone (aka "cause and effect") diagram

The fishbone diagram is a visual way of helping to understand why something has happened or what one would like to see happen. So, for example, in the diagram below, the desired **effect** or outcome is that the children have a good week at camp. In the diagram, six main **causes** are identified: students, teachers, activities, camp facilities, outdoor conditions and other. Each cause could have sub-sections. A sub-section of "camp facilities" could be to determine whether the camp site has a braai area, lapa, sick bay and swimming pool.

The fishbone technique has also been used by schools to discuss these sort of problems (called "challenges" in South Africa!):

- Reduce incidents of stealing
- Get greater involvement by children in extramural programme
- Make the school a truly "bully-free zone" at both child and staff level.



### 4 Flow chart diagram

In one school it was noticed that it seemed to "lose" a huge amount of textbooks at the end of every year. Books went missing. The senior management introduced a year-end flow chart diagram system and the number of books not returned to the school was reduced to almost nil. Every child had to get a form signed by teachers in a sequential order. Only once all the teachers had signed the form indicating that the textbooks had been returned or replaced, would the child be given the report card.

A flow chart is a diagram which shows the sequential steps that need to be followed to arrive at a desired outcome.

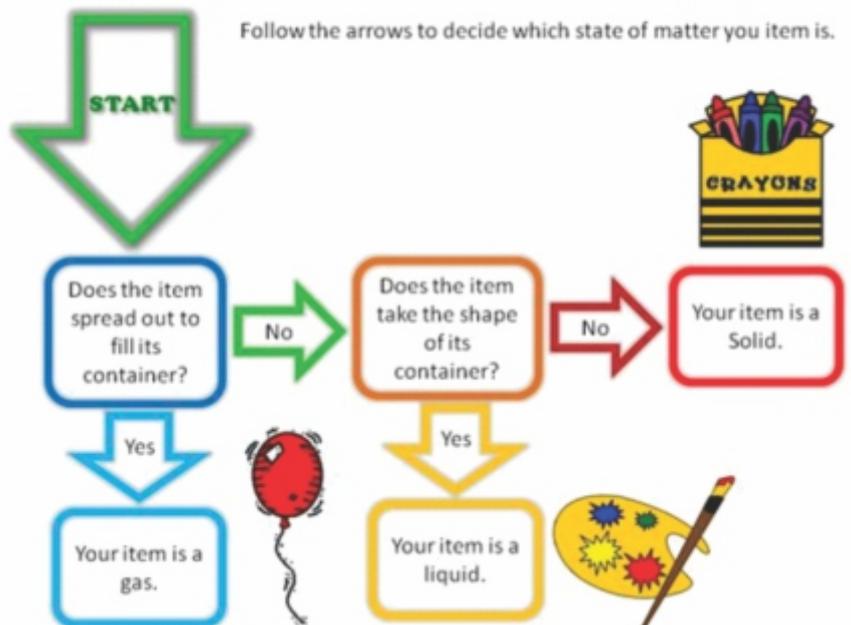
When the flow chart route is followed, everyone knows what to do and time isn't wasted. Stress levels go down and the classroom or school becomes more efficient. Areas where flow charts have been used include:

- Procedure to follow with an application for school admission
- First day and week for a new child at the school
- Dealing with a complaint from a parent
- Support given to an indigent child

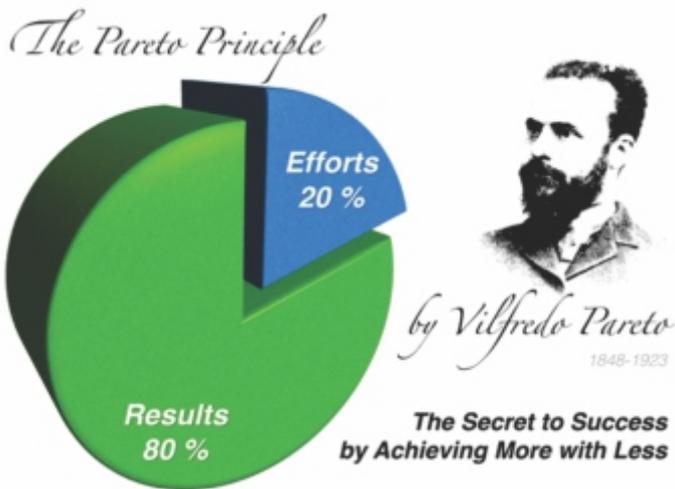
Flow charts are often used in lessons to simplify written material found in textbooks. There are, of course, those children who find it easier to learn when work is presented in a visual format. Here's an example from a United States elementary school:

### Is it a **Solid**, a **LIQUID**, or a **GAS**?

Follow the arrows to decide which state of matter you item is.



## 5 Pareto analysis



Vilfredo Pareto, an Italian economist, came to a research finding that most of the wealth in his country was in the hands of a minority of the people. From his findings, he noticed that 80% of the wealth was in the hands of the rich. The other 20% was spread amongst the majority of the population. (As an aside, the situation is similar in South Africa.)

From Pareto's analysis, quality management experts have noticed that when there are quality deficiencies, they can be solved if one puts the most effort into solving a few of the major issues. The other concerns are most likely to fade away. This quality technique is known as the **Pareto Principle** or the **80/20 rule**.

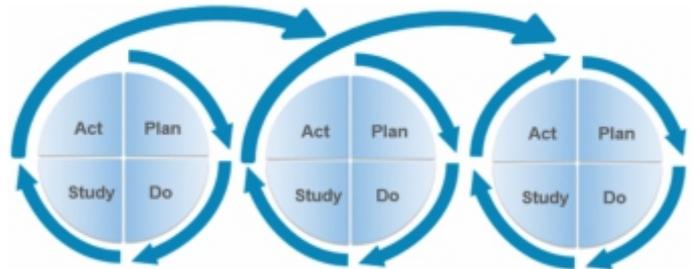
Imagine the undisciplined, "wild class from hell". It's the class that no one seems to be able to get under control. Yet they can be managed if the teacher focuses on dealing with two or three major areas of indiscipline. For example, it could be the way that they are made to line up outside the classroom and made to walk quietly into the room. Then it could be the way that the children are made to stand quietly at their desks before being given permission to sit down.

Spend a good deal of time dealing firmly with these few basic behaviour issues that might have disrupted the start of the lesson. You could find that many other behaviour problems simply fade away.



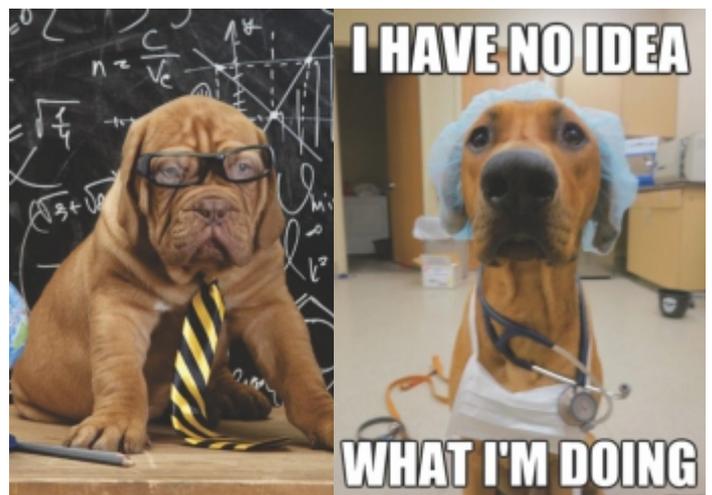
## 6 PDSA (Plan – Do – Study –Act) cycle

Early in January this year, the senior management of a school sat round a table to analyse their 2016 Grade 12 results. They were thrilled: a 100% pass rate for every subject and every student was eligible to enter a tertiary institution. In the midst of their jubilation, the headmistress gently reminded them of a Quality management technique – the PDSA cycle. "Yes," she gently and with wry humour reminded her colleagues, "the overall percentage in a particular subject was an excellent 71% but there's still a gap of 29% to reach perfection!"



Everyone in the Quality school is always in a state of continuous improvement. The PDSA cycle helps the process. In the Planning stage, the person plans what needs to be done. At the starting point, there could be thinking around new challenges that could be taken on. In the second stage, the Doing stage, what has been planned is carried out. Changes can be brought about. In the third stage, Studying, there's an assessment of what went right and what needs further improvement. In the Acting stage, new and better ways of doing things are decided on and done.

The PDSA cycle is a never-ending cycle. As one reaches a new level, the PDSA cycle is repeated.



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