



Why **EXPERIENCE** Can Damage

an Engineer



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Einstellung literally means "setting" or "installation" in German.

The **Einstellung effect** is the negative effect of previous experience when solving new problems.

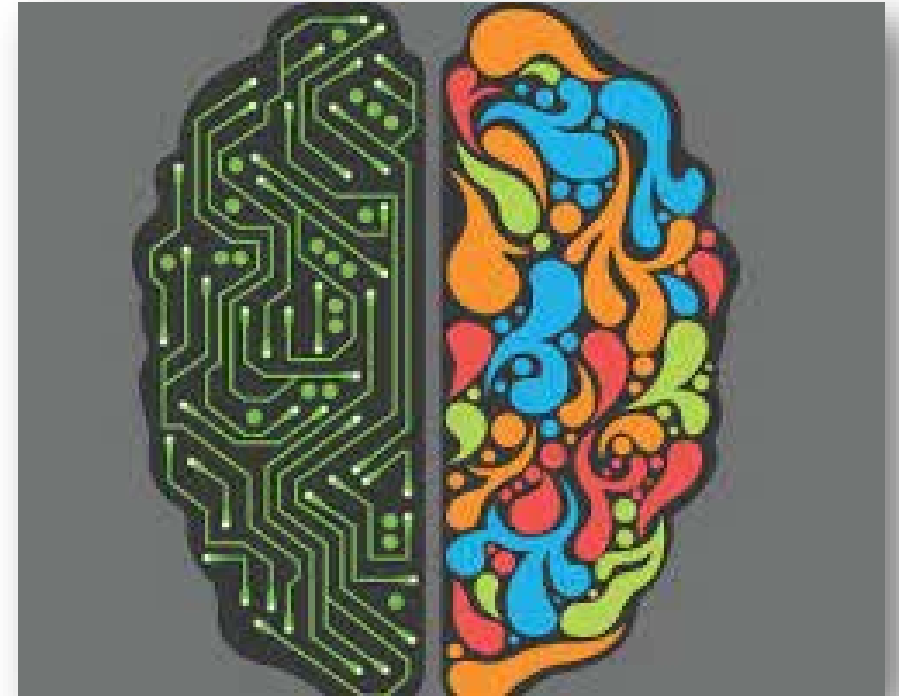
Einstellung refers to a person's predisposition to solve a given problem in a specific manner even though better or more appropriate methods of solving the problem exist.

**WHAT IS
EINSTELLUNG
EFFECT**



The **Einstellung effect** is one of the human brain's ways of finding an appropriate solution/behavior as efficiently as possible. The detail is that though finding the solution is efficient, the solution itself is not or might not be.

If we consider this issue as one of the **cognitive errors**, we can remember cases in our career where experience has been an obstacle to find a solution.



I remember when I was doing **failure analysis**, I came across this case many times.

For example, when the shape of the crack under the microscope was similar to the crack that I had seen in a certain sample last year, then I was tempted to end the review and not go for further analysis.



Little by little I learned that I have to be careful with my experiences!

Many books and articles have been devoted to failure analysis, but less has been said about the characteristics of the person who does this work, the **failure analyst**.

I made a list of the most important requirements of Failure Analyst, the last 3 items are related to not falling into the trap of experience!

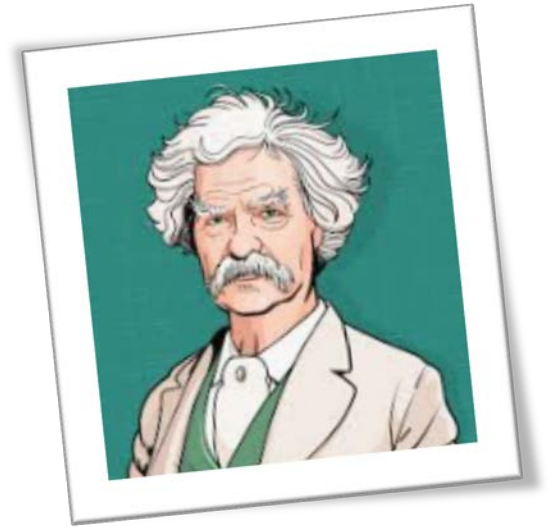


A failure analyst :

- At least, a failure analyst must have a broad basic understanding of the two fields of materials: **materials science** and **materials engineering**. (MSE)
- Should have good attitude
- Should have an open and questioning mind
- Doesn't assume anything
- To believe that experience is a guide, not a prison



Mark Twain: “We should be careful to get out of an experience only the wisdom that is in it—and stop there”



Please comment your ideas and experience about

Einstellung Effect

This presentation was developed by Kamran Khodaparasti.

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References:

https://en.wikipedia.org/wiki/Einstellung_effect

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