



ASQ CRE Prep course

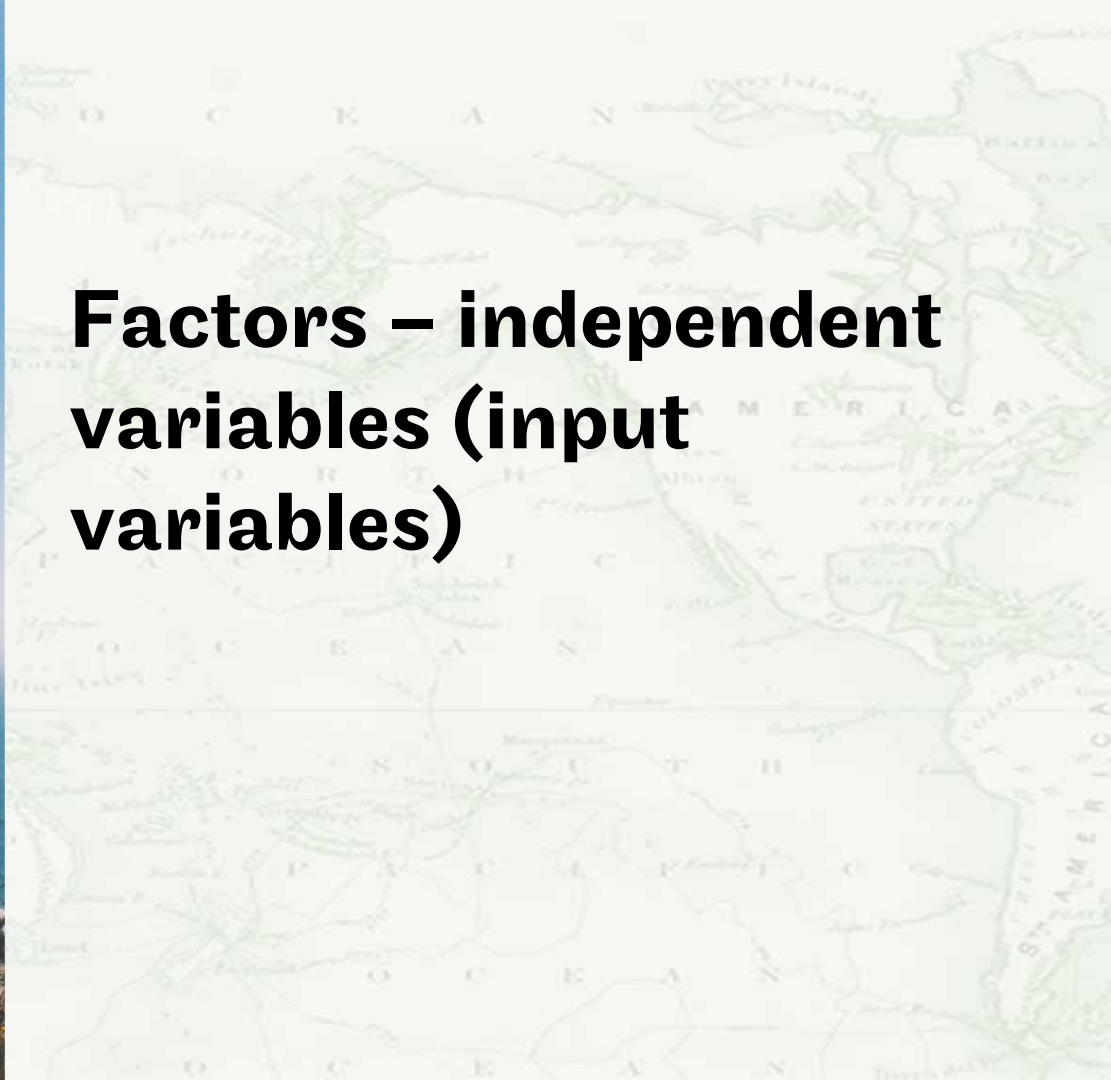
Lesson III. A. 7. c.

Design of Experiments

Language of DOE



**Factors – independent
variables (input
variables)**



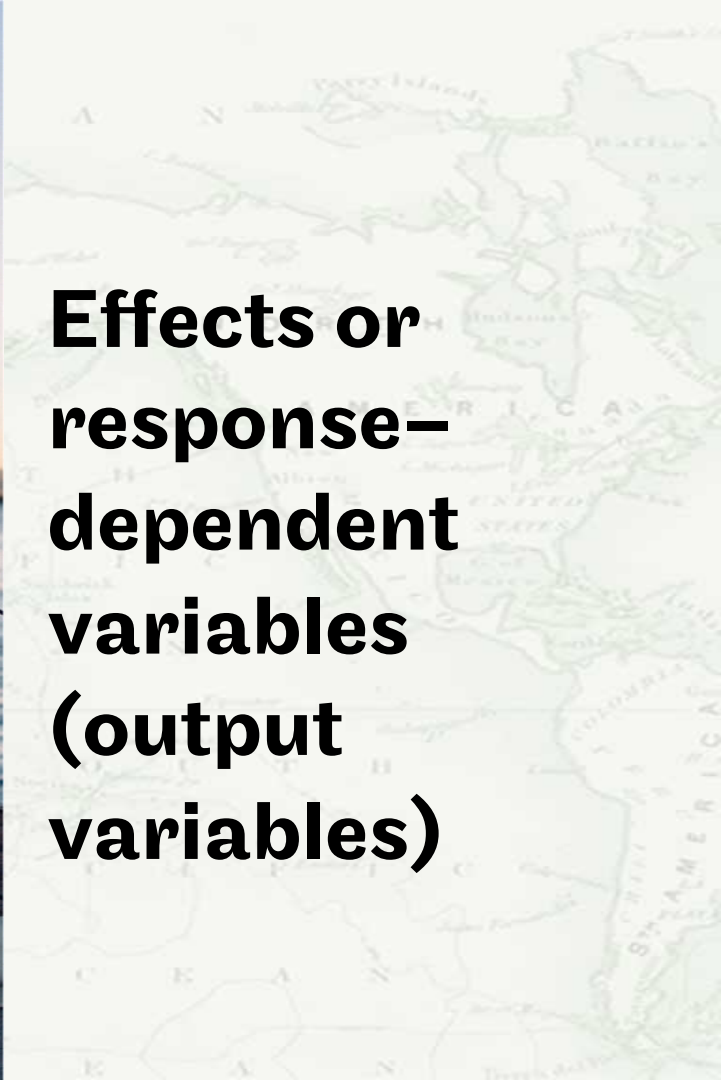


**Levels –value at
which the
factors are set**





**Effects or
response–
dependent
variables
(output
variables)**



Interaction– influence of the variation of one factor on the results obtained by varying another factor



Main effects– the results or change of output caused by changing an input



An aerial photograph of a beach. The foreground is filled with golden sand, showing numerous footprints. The ocean waves are breaking onto the shore, with white foam visible. The water transitions from a light turquoise near the beach to a deeper green further out. The waves are moving from the top right towards the bottom left.

Controllable Factors

– we can set and hold these

**Uncontrollable Factors
– they just vary as they
will**



**Noise– effect of
all the
uncontrollable
factors**



Not really
different than
any experiment?



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Lesson III. A. 7. d.

Design of Experiments

Only the Right Experiments