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-Professor and Chairman, IME Department, Cal Poly Pomona

-37 years of industry consulting (Clients: The Gas Co.; Trader Joe's; Target; Honeywell; Libbey Glass; Kal Kan; ...)

-Education: PhD, MS in ISE, USC; BS in ISE, San Jose State University

-Publications: Two books; several Professional Journal articles

-Awards: ASEE Educator of the year; Cal Poly Pomona Provost Excellence in Teaching Award; Advisor of the Year award;

-Fellow of the Institute of Industrial and Systems Engineers



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Learn by Doing: Making Imagination Real



Pacific
Region

Excellence Through Quality™

Engineering Education Resilience with pandemics



by:



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Resilience:

The ability and Persistence to Maintain/recover quickly from disturbances



Characteristics:

Flexible; Scalable; Adaptable; Innovative; Fast;
Goal Oriented; Damage/Pain tolerant



Recovering How:

Before and After:

- Same/Better Means
and
- Same/Better Variances
- For all, or most measures

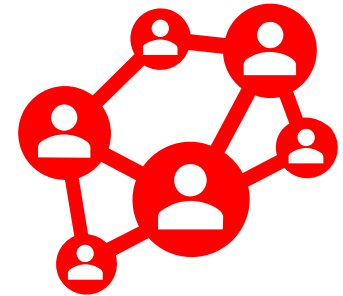




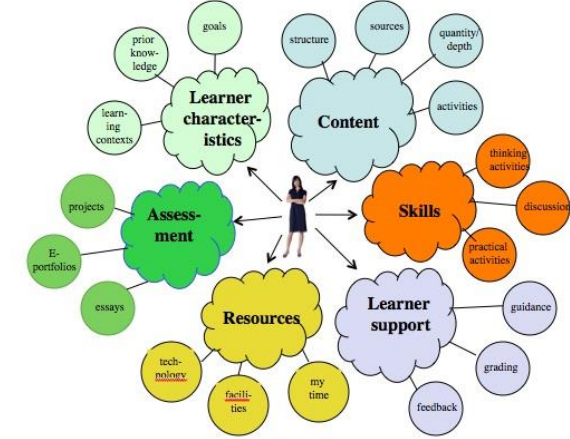
Recovery Period:



less than one week



Education System Components



1- Teacher (Sender and Receiver)

2- Student (Sender and Receiver)

3- Communication tools (Classroom to Zoom; Balckboard to Tablet; Chalk to Stylus)

4- Environment (Classroom to Living room)

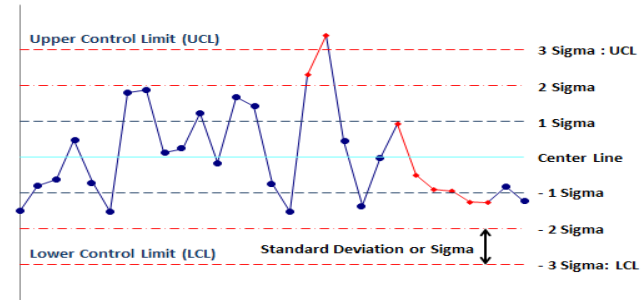
5- Mode (Face-Face; Remote; Hybrid)

6- Method (Learn by Doing/ Learn by Looking)}



Measures of Quality for Engineering Education:

- 1- Student Learning Outcomes
- 2- Program Outcomes
- 3- Student Success (Time)
- 4- ROI: Value /Input (Tax support & Private)
- 5- Satisfaction (Educator & Student Experience)



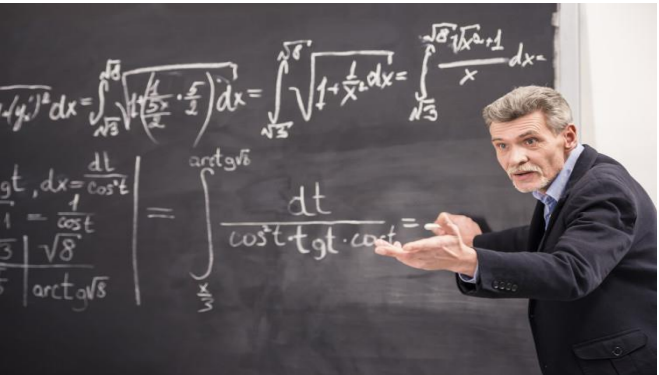
Assessment Tools:

- 1- Student Feedback
- 2- Examinations
- 3- Rubrik
- 4- Future supervisor's feedback



Assessor:

- Who (professor) or What (Computer)
- Traditional vs Adjusted



Results:

- Education industry showed high resiliency vs: Manufacturing; Service; Travel; Hospitality,....

Why:

Available Technology; Removal of options to change; System motivation

- Program Outcomes remains to be measured



What do you think?



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