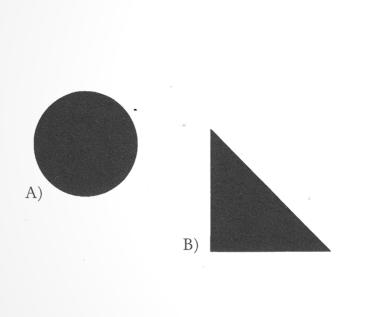
### Preparing for a Site Visit

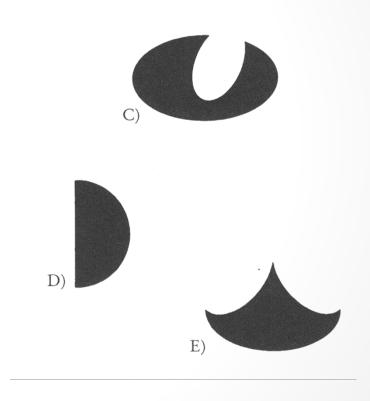
## EMPATHIZE / DISCOVERY: I have a challenge, How Do I approach it?

- Creativity: The Right Answer
- Forming Teams
- Choosing a Project
- Preparing for a Site Visit
- Learning to Observe: Thoughtless Acts

Ronald B. Bucinell, Ph.D., P.E., Union College, Mechanical Engineering

## Five figures are shown below. Select the one that is different from all the others.





# A Creative Culture Needs to be actively Pursued. cna yuo raed tihs?

i cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid, aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it dseno't mtaetr in waht oerdr the Itteres in a wrod are, the olny iproamtnt tihng is taht the frsit and Isat Itteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it whotuit a phoerlm. Tihs is becuseae the huamn mnid deos not raed ervey Iteter by istlef, but the wrod as a wlohe. Azanmig huh? yaeh and I awlyas tghuhot slpeling was ipmorantt! if you can raed tihs forwrad it.

## Creative Insight From Heraclitus

Expect the unexpected or you won't find it.

### CREATIVITY

### 1. Getting the RIGHT ANSWER

- Our education system has taught us to look for the one right answer
  - o The most innovative is most likely the 2<sup>nd</sup>, 3<sup>rd</sup>, or 10<sup>th</sup>
- Many ways to get to the SECOND Right Answer
  - Solicit plural answers
  - o Ask "What if..."
  - o Playing the fool.
  - o Reversing the problem.
  - o Breaking the rules.
  - o Etc.

## Effective Ideation Requires that Guidelines are Establish

#### In the Initial Ideation Phase

- 1. No Evaluation or Logic
- 2. Relax
- 3. Quantity (do not worry about quality)
- Stream of Ideas
- 5. Think in Pictures
- 6. Build onto Idea Fragments

#### To Encourage Listening and Premature Judgment

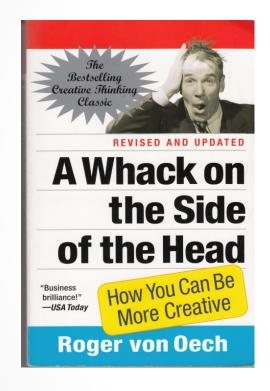
- Start all sentences with a <u>positive statement</u> about the previous speakers statement.
- 2. <u>Do not allow</u> anyone to use the word <u>"but"</u> in their sentence.

## "Killer Phrases" That CAN NOT Be Used In Class Today

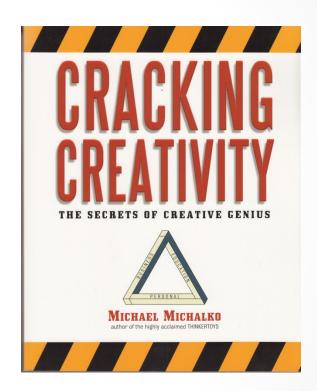
- A good idea, but ...
- 2. Against company policy
- 3. All rig theory.
- 4. Be practical.
- 5. Costs too much.
- 6. Don't start anything yet.
- 7. It needs more study.
- 8. It's not budgeted.
- 9. It's not good enough.
- 10. It's not part of your job.
- 11. Let's make a survey first.
- 12. Let's sit on it for a while.

- 13. That's not our problem.
- 14. The boss won't go for it.
- 15. The old timers won't use it.
- 16. Too hard to administer.
- 17. We have been doing it this way for a long time it works.
- 18. Why hasn't someone suggested it before if it's such a good idea?
- 19. Ahead of the times.
- 20.Let's discuss it.
- 21.Let's form a committee.
- 22. We've never done it that way before.
- 23. Who else has tried it.

# Two References are Particularly Good at Developing a Culture of Creativity

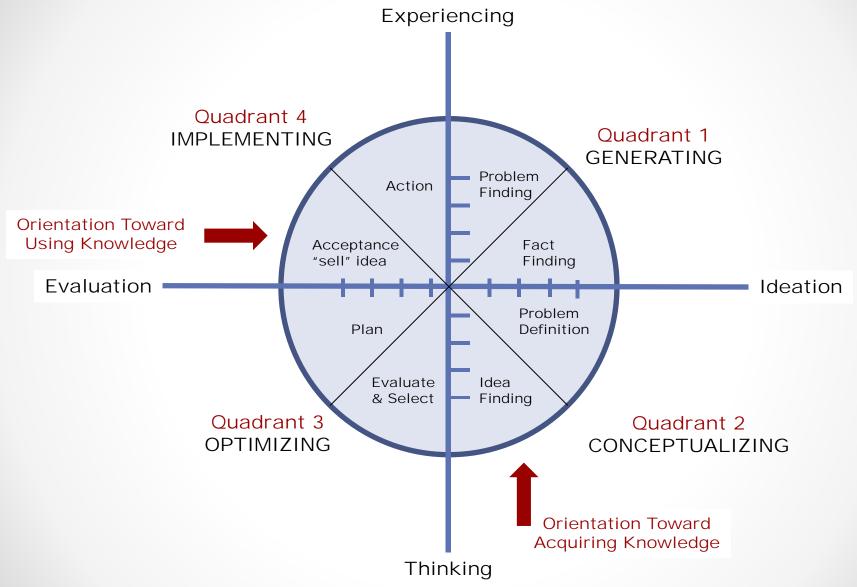


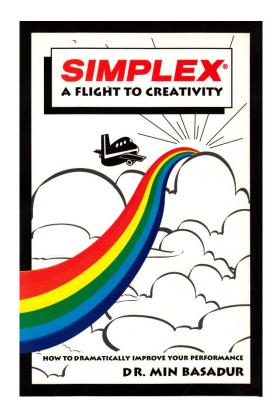
http://www.creativethink.com/



http://creativethinking.net/#sthash.p34QIhZn.dpbs

## The Innovation Process as a Cycle





http://www.basadur.com/