Opportunities for Faculty in Educational Research
some common views ...

- faculty are deeply interested in the instructional process - in being good instructors in the classroom ...

- … and being innovators in their own classes ...

- … but they have too many other concerns to seriously engage in "educational research"
some realities

- the core of "educational research" is assessment

- assessment of learning outcomes plays in another way for Engineering
if outcomes based learning plays for Engineering Faculty ... then...

- you can use what you need to do to support your department anyway to your own advantage...
- get involved in Engineering Education research
- ... there are multiple paths
Path 1 - Get engaged in Engineering Ed Research in your own classroom

- you innovate, so...

- ... report the results of your innovation to the world - just like you report the results of your disciplinary research to the world
Path 1 - Get engaged in Engineering Ed Research in your own classroom (cont)

- the path is ...
  - decide on what you want to try
  - work with an Egr Ed person to state learning outcome goals, develop a plan, and get the necessary IRB approvals
  - execute the plan, gather the data, analyze the data - again an Egr Ed person will help
  - publish the results!! (ASEE, regional or national is a good place to start)
Path 2: Develop curriculum or laboratory materials that are new/innovative

- Work with an Egr Ed person to develop an NSF CCLI grant proposal.
  - regular NSF proposal
  - many times are awarded for single course changes, although can be also for programatic change
  - opportunity to be a node in an NSF webinar on CCLI proposal process - need to promise 10 participants 2-5 pm, Tuesday April 14

interested?
Path 3: as part of your own research group, develop a proposal for an NSF SITE REU (support undergrads)

- cite proposals for REUs fund a number of undergrad student researchers around a common theme
- expectations to get a site REU are
  - strong disciplinary or interdisciplinary research group
  - willing/eager to attract the best and brightest undergrad students with possible grad school overtones
  - a developed plan to manage the REU students
Path 4: as part of your own research group, develop a proposal for an Dept of Ed GAANN (grad students)

- cite proposals for REUs fund a number of undergrad student researchers around a common theme
- expectations to get a site REU are
  - strong disciplinary or interdisciplinary research group
  - willing/eager to attract the best and brightest undergrad students with possible grad school overtones
  - a developed plan to manage the REU students
Path 5: leverage your classroom projects into an NSF IEECI proposal

Innovations in Engineering Education, Curriculum, and Infrastructure (IEECI)
Path 5: become engaged with the existing large scale research in the College in Egr Ed Research

- NSF STEP
- NSF CPATH
Big Picture is...

- doing research is what most faculty engage in heavily
- doing classroom teaching is also an important activity
- applying the same viewpoint to our instruction as we do to our disciplinary research is a path with high pay off