Results

- Taught in various industrial and academic settings
- Students write a series of simple programs while learning PSP
- Defects/KLOC went down for later programs
- Yield increased when code reviews introduced
- Defects/KLOC went down for later programs
- Learning PSP
- Students write a series of simple programs while
- Taught in various industrial and academic settings

Embry-Riddle Experience

- A/FR increased for later programs
- Embry-Riddle Experience felt that level of effort was perhaps too high

Systematic approach to size estimates was valuable process and design reviews were most important step of process.

Yield increased when code reviews introduced
PSP3

- Design templates
  - Used to help determine when design is complete
  - Internal-static dynamic
  - External-static dynamic
  - External-static dynamic
Defects/KLOC, Defects/Hour

Yield = defects found before compile / defects injected before compile

Want to increase to improve product quality

Want to increase to improve productivity

Cost of Quality (COQ)

Failure Costs = Compile + Test Time / Total Time

Appraisal Costs = Review Time / Total Time

Appraisal Failure Ratio (A/FR) = Appraisal COQ / Failure COQ

Want to increase this value

Productivity

Want to decrease to improve

Cost of Quality (COQ)

Defects/KLOC, Defects/Hour

PSP2
PSP1

Job Number Log

- Estimated, Actual, and ToDate times
- Estimated and Actual LOC (or other size estimate)
- Estimated, Actual, and ToDate times
- Project Plan Summary
- Gantt Chart

Summary of Size, Time, Defects

PSP1
- Time Recording Log
  start/stop time for every activity
- Weekly Activity Summary
  summary of daily and weekly times for activities
  averages, maximum, and minimums
- Defect Recording Log
  Type and time to fix for each defect found
  phase of development where defect injected and where
  removed
- LOC Size Measurements
  Minutes/LOC and LOC/Hour
incremental development of larger-scale software

Scaling Up (PSP3)

design completeness and consistency
defect management
defect management

Personal Quality (PSP2)
schedule and task planning
PROBE to estimate size and development times

Personal Planning (PSP1)
Process Improvement Proposal
coding standard
measure time, defects, size

Personal Measurement (PSP0)

PSP process evolution
The improvement process

add the improvement process diagram here
• Process improvement method for individuals and small teams

• Supports CMM through bottom-up approach to improving process

• Quantitative techniques to measure and analyze progress

Personal Software Process