

Personal Software Process (PSP)

Applies the CMM concepts of process discipline and quantitative management to the work of the individual software professional in a classroom setting.

Focuses on planning, quality, and productivity.

Typically involves the development of ten programs, using increasingly sophisticated processes.

Watts Humphrey, A Discipline for Software Engineering, 1995.

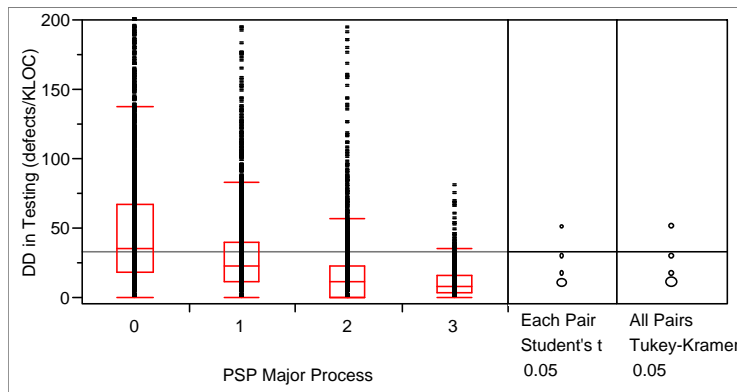
1

PSP Assignments, Processes, and Major Processes

<u>Major PSP</u>	<u>Process</u>	<u>Asgn</u>	<u>Process</u>	<u>Practices</u>
0		1A	PSP0	current process, basic measures coding standard, process improvement proposal, size measurement
		2A	PSP0.1	
		3A	PSP0.1	
1		4A	PSP1	size estimating, test report task planning, schedule planning
		5A	PSP1.1	
		6A	PSP1.1	
2		7A	PSP2	code reviews, design reviews design templates
		8A	PSP2	
		9A	PSP2.1	
3		10A	PSP3	cyclic development

2

Improvements in PSP Quality (PSP2001)



The seminal study on PSP is

Hayes, W. and J.W. Over. "The Personal Software Process (PSP): An Empirical Study of the Impact of PSP on Individual Engineers." Software Engineering Institute, Carnegie Mellon University, 1997.

3

Team Software Process (TSP)

Build teams of PSP-trained professionals, launched in an industry project context.

Provide

- a supportive environment
- management standards
- peers doing similar work
- coaching support

Note that Software CMM tells "what" to do but not how. PSP and TSP tell "how."

Watts Humphrey, Introduction to the Team Software Process, 1999.

4

Effective Teams

Group thinking is usually better, less variable, and more precise than individual thinking.

- *Hare, L.B., R.W. Hoerl, J.D. Hromi, and R.D. Snee. "The Role of Statistical Thinking in Management." ASQ Quality Progress (February 1995).*

Range of team performance, rather than being an order of magnitude, tends to be between 85% and 115% of the norm.

- *DeMarco, T., and T. Lister. *Waltzing with Bears: Managing Risks on Software Projects*, 2003.*