

Figure 14. Overall summary for fault detection rate (# faults detected per hour).

		Phase		
		1	2	3
Effect	Level	Mean(SD)	Mean(SD)	Mean(SD)
Technique	Reading	1.90 (1.83)	0.56 (0.46)	3.33 (3.42)
	Functional	1.58 (0.90)	1.22 (0.91)	1.84 (1.06)
	Structural	1.40 (0.87)	1.18 (0.84)	1.82 (1.24)
Program	Formatter	1.60 (1.39)	0.98 (0.67)	2.15 (1.10)
	Plotter	1.19 (0.83)	0.92 (0.71)	. (.)
	Data type	2.09 (1.42)	. (.)	3.70 (3.26)
	Database	. (.)	1.05 (1.04)	1.14 (0.79)
Expertise	Junior	1.36 (0.97)	1.00 (0.85)	2.14 (2.48)
	Intermed.	2.22 (1.66)	0.96 (0.74)	2.53 (2.48)
	Advanced	. (.)	. (.)	2.36 (1.61)

Figure 15. Characterization of the faults detected.

	Code Reading	Functional Testing	Structural Testing	Overall
Omlsson	55.6 (40.1)	61.0 (39.5)	39.2 (41.6)	52.0 (41.3)
Commisson	54.3 (32.1)	53.5 (25.4)	44.3 (26.6)	50.7 (28.4)
Total	54.1 (29.2)	54.6 (24.5)	41.2 (26.1)	50.0 (27.3)
Initial.	64.6 (40.3)	75.0 (36.1)	46.2 (39.8)	61.5 (40.2)
Control	42.8 (36.6)	66.7 (34.9)	48.8 (36.5)	52.8 (37.2)
Data	20.7 (36.6)	28.3 (44.9)	26.8 (41.9)	25.3 (41.0)
Computat.	70.9 (37.0)	64.2 (40.8)	58.8 (43.5)	64.6 (40.6)
Interface	46.7 (38.5)	30.7 (33.5)	24.6 (29.4)	34.1 (35.1)
Cosmetic	16.7 (38.1)	8.3 (28.2)	7.7 (27.2)	10.8 (31.3)
Total	54.1 (29.2)	54.6 (24.5)	41.2 (26.1)	50.0 (27.3)

Figure 16. Characterization of faults detected by the three techniques: 10 omission (O) vs. 24 commission (x). The vertical axis is the number of persons using the particular technique that observed the fault.

	Reading	Functional	Structural
100%	O xxxx Oxxx	OxO Oxxx	Ox
75%	O x xO xxx xx	x xOxxx x xx	x x O xxx xx
50%		x Oxx xxxO	x
	Ox x		xOxxx x Ox
25%	Oxx xxxx O	xx	x xxx xO O
		xOoxO	OxOO
0%	xOoxO	xOx	Oxx

Figure 17. Characterization of faults detected by the three techniques: Initialization (2-A), computation (8-P), control (7-C), data (3-D), interface (13-I), and cosmetic (1-S). The vertical axis is the number of persons using the particular technique that observed the fault.

	Reading	Functional	Structural
100%	P PIII CIII	PIP PIIC	PC I
75%	P C AP AIP CC	A ACPPC C CC	P C P PCP PC A
50%	CP D	D CPI III	DPIII A CI
25%	DCI SPII I	PI SIPID	I IIC II D CSDI
0%	CPIID	IDI	PII

Figure 18. Characterization of the faults observable, but not reported.

	Functional Testing	Structural Testing	Overall
Omission	15.7 (25.4)	21.3 (31.8)	18.5 (28.8)
Commission	19.1 (20.0)	20.1 (16.6)	19.6 (18.3)
Total	18.1 (17.8)	19.9 (16.8)	19.0 (17.3)
Initial.	5.0 (15.4)	14.3 (32.2)	9.8 (25.5)
Control	20.3 (30.6)	21.1 (31.4)	20.7 (30.8)
Data	28.6 (43.5)	7.5 (24.5)	18.3 (36.7)
Computat.	16.0 (31.3)	20.1 (37.6)	18.0 (34.5)
Interface	16.1 (20.0)	20.3 (21.5)	18.2 (20.8)
Cosmetic	60.0 (50.3)	85.7 (35.9)	73.2 (44.9)
Total	18.1 (17.8)	19.9 (16.8)	19.0 (17.3)

