Profile of a Cohort - A statistical profile of the 1997 CS entry

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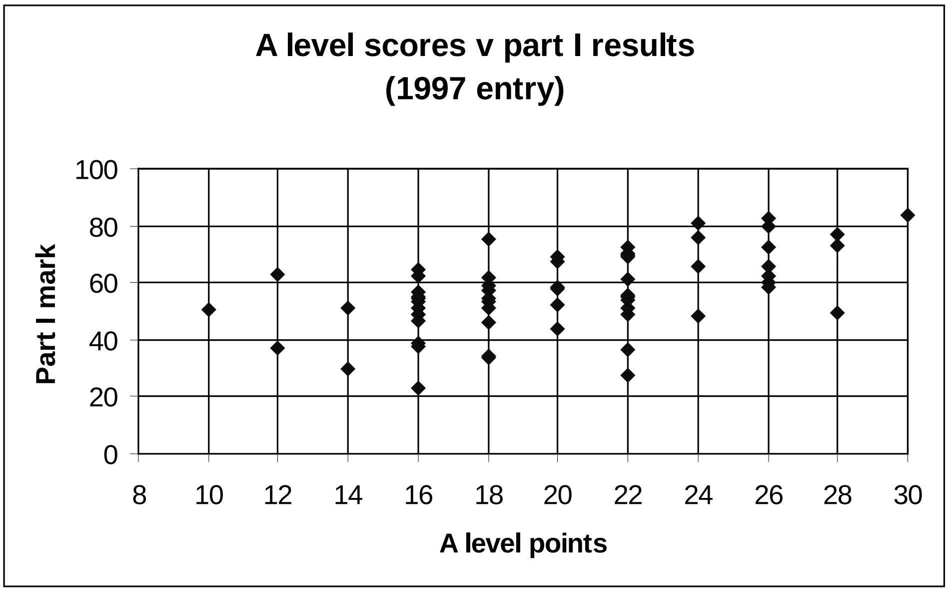
Contents

General Entry Qualifications

The A-level Entrants

Does a higher A-level point score mean a higher part I result?



The product moment correlation coefficient between A-level points and part I result is 0.53

Do students with 24+ points do significantly better?

Points	mean	sd
24+	69.0	11.1
<24	53.8	11.3

There is evidence to suggest that students with 24+ points do better at part I (z = 4.61).

Do students with 22+ points do significantly better?

Points	mean	sd
22+	63.1	13.4
<22	52.6	10.4

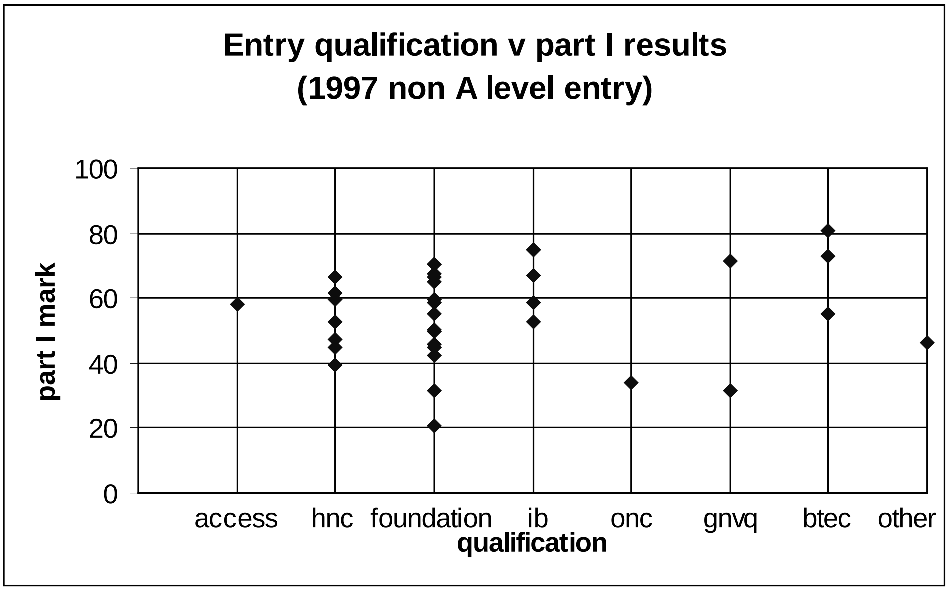
There is also evidence to suggest that students with 22+ points do better at part I (z = 3.45).

Does taking more than 3 A-levels have any effect?
Often only pupils considered to be 'more able' are allowed to take more than 3 A-levels. We only count the best 3 when calculating point scores. The following table excludes General Studies as a 4th subject.

	mean	sd
>3	57.9	14.7
<=3	57.0	11.9

There is insufficient evidence to suggest a difference between the two groups (z = 0.26).
(N.B. For evidence of statistical significance at the 5% level | z | >= 1.96)

The non A-level entrants



NB. Students entering the foundation year in 1997 sat part I exams in June 1999 whilst all other 1997 entrants sat them in June 1998.

qualification	mean	n
access	58.3	1
hnc	53.1	7
foundation	53.2	15
ib	65.6	5
onc	34.0	1
gnvq	51.4	2
btec	69.7	3
other	46.1	1
overall	55.7	35

The table shows the mean part I result for each of the non A-level entry routes, and the number of students taking each route.

Comparing A-level and non A-level entrants

	mean	sd
with A-levels	56.8	13.7
without A-levels	55.7	14.1
overall	56.4	13.9

There is no evidence to suggest a statistically significant difference between the mean part I score of the A-level and non A-level entrants (z = 0.37).

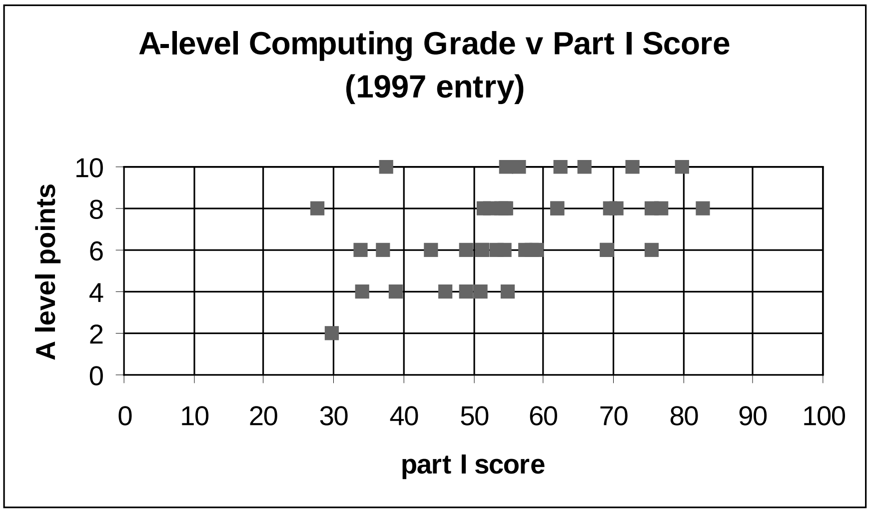
Analysis by A-level Subject

Subject	number
Computing	41
Maths	46
Further Maths	4
Accounting	1
Physics	42
Chemistry	11
Biology	8
Electronics	5
D&T	6
Sociology	1
Politics	1
History	4
Geography	4
Economics	8
Business Studies	8
Greek	5
German	2
French	1
Latin	1
English	5
Music	1
General Studies	17

Subjects			
Computing	Maths	Physics	Number
Yes	Yes	Yes	22
Yes	Yes	No	8
Yes	No	No	11
No	Yes	Yes	12
No	Yes	No	4
No	No	No	8

The most popular combination of A-levels is Computing, Maths and Physics, and students who did not take A-level Maths did not take A-level Physics either.

Computing

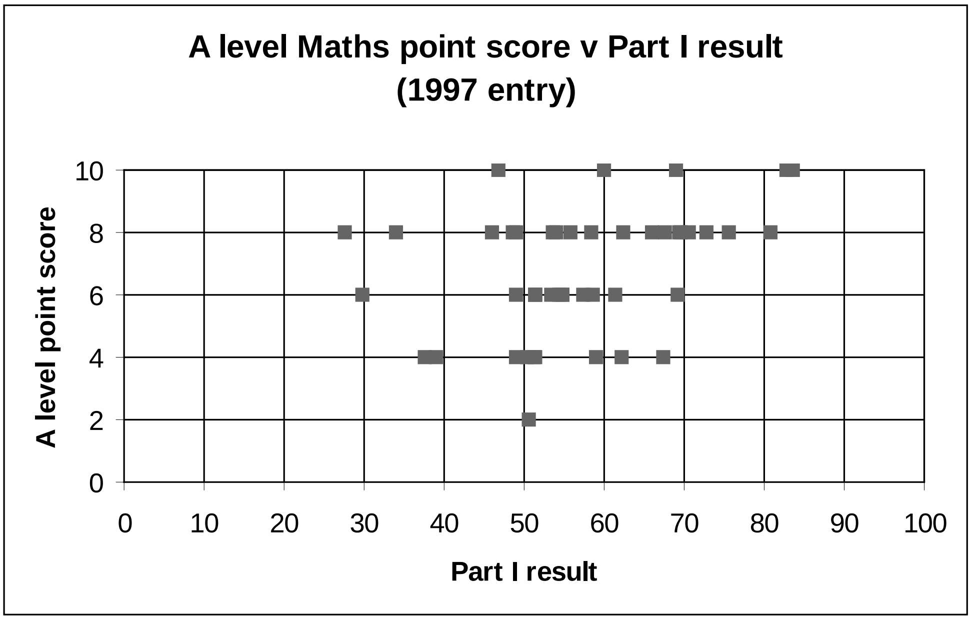


Correlation coefficient = 0.46

	with	without
proportion	42.7	57.3
mean part I result	55.8	58.2
standard deviation	13.7	7.0

The mean part I result for students without A-level computing is higher than that for students with A-level computing, but there is insufficient evidence for statistical significance (z = 1.01).

Mathematics



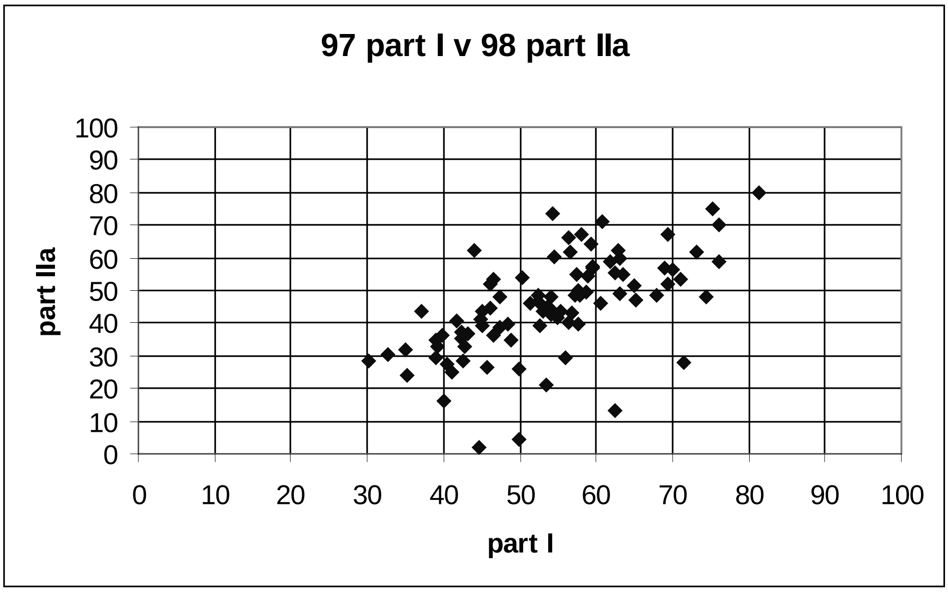
Correlation coefficient = 0.1

	with	without
proportion	47.9	52.1
mean part I result	56.9	57.5
standard deviation	12.6	16.3

The mean part I result for students without A-level mathematics is slightly higher than that for students with A-level mathematics, but there is insufficient evidence to suggest that the difference is statistically significant (z = 0.20).

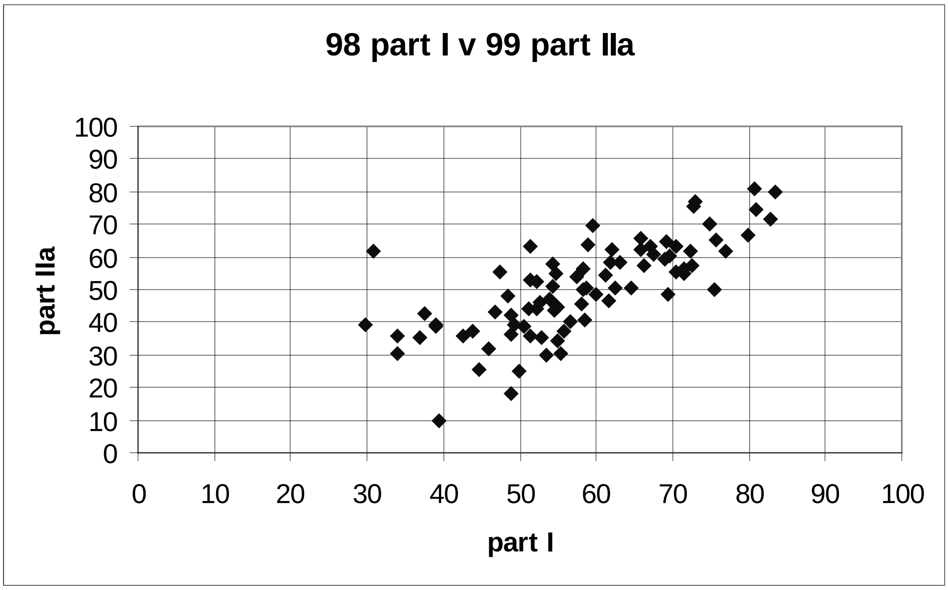
Trends

1997 entrants



Correlation coefficient = 0.61
The least squares regression line of Part IIa mark on Part I mark is y = 0.8x + 0.5
(I.e. A mark of 47.8 at Part I corresponds to a mark of 40% at Part IIa. - not particularly meaningful with such a low correlation!)

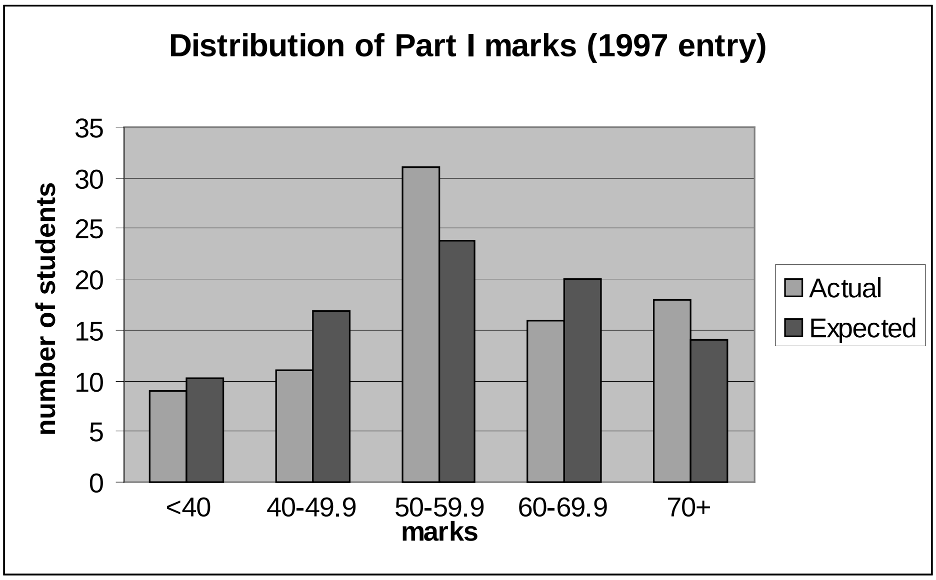
1998 entrants



Correlation coefficient = 0.74
The least squares regression line of Part IIa mark on Part I mark is y = 0.8x + 2.0
(I.e. A mark of 45.5 at Part I corresponds to a mark of 40% at Part IIa.)

Distribution of marks

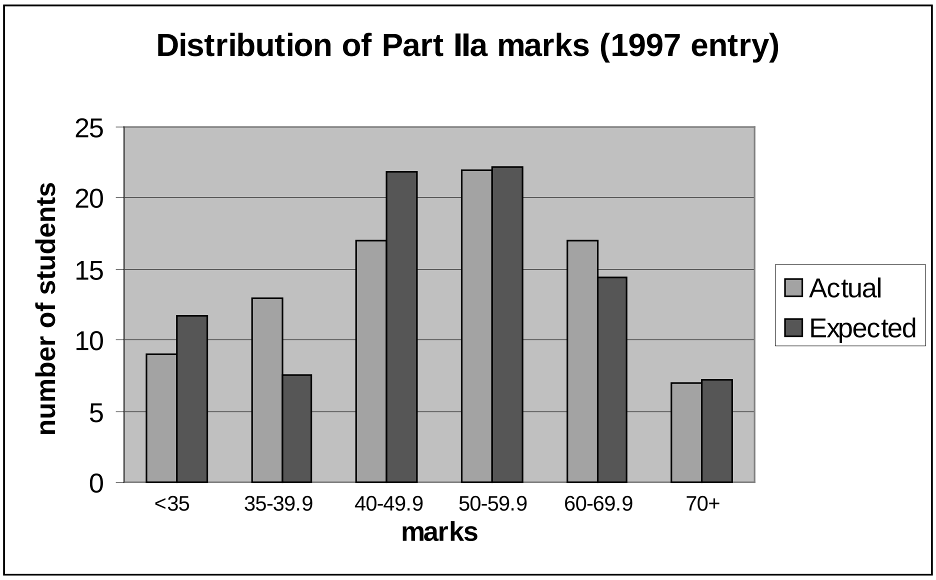
Part I



Marks	O	E	$(O-E)^2/E$
<40	9	10.3	0.16
40-49.9	11	16.8	2.03
50-59.9	31	23.8	2.21
60-69.9	16	20.0	0.80
70+	18	14.1	1.07
			6.27

$X^2_{calc} < 9.49$, so the part I marks follow a normal distribution.

Part IIa



Marks	O	E	$(O-E)^2/E$
<35	9	11.7	0.63
35-39.9	13	7.5	3.95
40-49.9	17	21.9	1.09
50-59.9	22	22.2	0.00
60-69.9	17	14.4	0.47
70+	7	7.3	0.01
			6.16

$X^2_{calc} < 11.07$, so the part IIa marks also follow a normal distribution.

Other

CO309 results by degree programme

The figures used here are for all students registered for the Java programming module in the 1997/98 academic year.