HEFCE 01/46

The wider benefits of higher education

Appendix 2 Multivariate analysis results

Report by the Institute of Education, University of London, sponsored by the HEFCE and the Smith Institute

Notes:
Model 1 gives the estimates without controls.
Model 2 gives the estimates with controls for family background.
Model 3 gives the estimates with controls for family background and occupational experience.

P=significance level, i.e. probability of a chance result

Table 3.1.1a: Men – Logistic regression equations for the likelihood of professional/managerial employment (those in employment only)

	Model 1	P	Model 2	P
Constant	0.24	<.001	0.12	<.001
Education level				
Below A-level	1		1	
A-level & equivalent	2.26	<.001	1.80	<.001
Non-completers	12.31	<.001	7.98	<.001
Sub-degree	7.53	<.001	5.85	<.001
Mature degree	13.62	<.001	8.76	<.001
Degree & higher	41.00	<.001	24.11	<.001
Missing	0.90	Ns	1.05	Ns
Father's occupation at 16				
Manual			1	
Intermediate			1.44	<.001
Service			2.08	<.001
Missing			1.09	Ns
Mother's education				
By age 15			1	
Aged over 16			1.31	<.01
Missing			1.35	<.05
Mother's interest at 11				
Very interested			1	
Little or some interest			0.87	Ns
Missing			0.91	Ns
Over-crowded at 11				
Not over-crowded			1	
Over-crowded			0.94	Ns
Missing			1.14	Ns
Free school meals at 11				
No free school meals			1	
Free school meals			0.66	<.05
Missing			0.80	Ns
Ability tests at 11				
Low			1	
Middle			1.80	<.001
High			2.54	<.001
Missing			1.70	<.001
N	**4805**			
Loglikehood with constant only	6472 (df 4804)			
Loglikelihood with model fitted	5023 (df 4798)		4830 (df 4784)	

Table 3.1.1b: Women – Logistic regression equations for the likelihood of professional/managerial employment (those in employment only)

	Model 1		Model 2	
	Odds ratio	**P**	**Odds ratio**	**P**
Constant	0.21	<.001	0.15	<.001
Education level				
Below A-level	1		1	
A-level & equivalent	2.47	<.001	2.21	<.001
Non-completers	6.90	<.001	6.05	<.001
Sub-degree	12.19	<.001	11.30	<.001
Mature degree	20.18	<.001	17.34	<.001
Degree & higher	32.44	<.001	27.60	<.001
Missing	1.62	Ns	1.56	Ns
Father's occupation at 16				
Manual			1	
Intermediate			1.06	Ns
Service			1.04	Ns
Missing			1.04	Ns
Mother's education				
By age 15			1	
Aged over 16			0.97	Ns
Missing			1.04	Ns
Mother's interest at 11				
Very interested			1	
Little or some Interest			1.11	Ns
Missing			0.99	Ns
Over-crowded at 11				
Not over-crowded			1	
Over-crowded			0.76	Ns
Missing			1.06	Ns
Free school meals at 11				
No free school meals			1	
Free school meals			1.23	Ns
Missing			0.94	Ns
Ability tests at 11				
Low			1	
Middle			1.41	<.01
High			1.66	<.001
Missing			1.27	Ns
N	**3819**			
Loglikehood with constant only	5010 (df 3818)			
Loglikelihood with model fitted	3777 (df 3812)		3752 (df 3798)	

Table 3.1.2a: Men – Logistic regression equations for the likelihood of not working (unemployment and economic inactivity)

	Model 1		Model 2	
	Odds ratio	P	Odds ratio	P
Constant	0.15	<.001	0.17	<.001
Education level				
Below A-level	1		1	
A-level & equivalent	0.39	<.001	0.50	<.001
Non-completers	0.68	Ns	1.08	Ns
Sub-degree	0.30	<.001	0.38	<.001
Mature degree	0.25	<.05	0.40	Ns
Degree & higher	0.29	<.001	0.46	<.001
Missing	0.94	Ns	0.84	Ns
Father's occupation at 16				
Manual			1	
Intermediate			0.69	<.05
Service			0.63	<..05
Missing			0.94	Ns
Mother's education				
By age 15			1	
Aged over 16			0.95	Ns
Missing			1.09	Ns
Mother's interest at 11				
Very interested			1	
Not very interested			0.98	Ns
Missing			1.02	Ns
Over-crowded at 11				
Not over-crowded			1	
Over-crowded			1.47	<.01
Missing			2.14	Ns
Free school meals at 11				
No free school meals			1	
Free school meals			1.83	<.001
Missing			0.47	Ns
Ability tests at 11				
Low			1	
Middle			0.63	<.001
High			0.51	<.001
Missing			1.11	Ns
N	**5586**			
Loglikehood with constant only	3527 (df 5585)			
Loglikelihood with model fitted	3402 (DF 5579)		3297 (df 5565)	

Table 3.1.2b: Women – Logistic regression equations for the likelihood of not working (unemployment and economic inactivity)

	Model 1		Model 2	
	Odds ratio	**P**	**Odds ratio**	**P**
Constant	0.55	<.001	0.62	<.001
Education level				
Below A-level	1		1	
A-level & equivalent	0.83	<.05	0.87	Ns
Non-completers	0.85	Ns	0.89	Ns
Sub-degree	0.53	<.001	0.55	<.001
Mature degree	0.64	Ns	0.66	Ns
Degree & higher	0.51	<.001	0.53	<.001
Missing	0.97	Ns	0.99	Ns
Father's occupation at 16				
Manual			1	
Intermediate			0.88	Ns
Service			1.06	Ns
Missing			1.02	Ns
Mother's education				
By age 15			1	
Aged over 16			1.09	Ns
Missing			0.99	Ns
Parental interest at 11				
Not interested			1	
Very interested			0.92	Ns
Missing			0.99	Ns
Over-crowded at 11				
Not over-crowded			1	
Over-crowded			0.95	Ns
Missing			0.77	Ns
Free school meals at 11				
No free school meals			1	
Free school meals			1.17	Ns
Missing			1.12	Ns
Ability tests at 11				
Low			1	
Middle			0.80	<.01
High			0.79	<.01
Missing			0.98	Ns
N	**5780**			
Loglikehood with constant only	7848 (df 5779)			
Loglikelihood with model fitted	7165 (DF 5773)		7144 (df 5759)	

5

Table 3.1.2c: Women – Logistic regression equations for the likelihood of working fulltime versus part-time work and not working

	Model 1		Model 2	
	Odds ratio	P	Odds ratio	P
Constant	0.41	<.001	0.34	<.001
Education level				
Below A-level	1		1	
A-level & equivalent	1.88	<.001	1.79	<.001
Non-completers	2.33	<.001	2.21	<.01
Sub-degree	2.04	<.001	1.94	<.001
Mature degree	3.67	<.001	3.51	<.001
Degree & higher	3.13	<.001	2.95	<.001
Missing	1.08	Ns	1.06	Ns
Father's occupation at 16				
Manual			1	
Intermediate			1.09	Ns
Service			0.98	Ns
Missing			0.91	Ns
Mother's education				
By age 15			1	
Aged over 16			1.09	Ns
Missing			0.99	Ns
Mother's interest at 11				
Very interested			1	
Not very interested			1.01	Ns
Missing			1.06	Ns
Over-crowded at 11				
Not over-crowded			1	
Over-crowded			0.94	Ns
Missing			1.13	Ns
Free school meals at 11				
No free school meals			1	
Free school meals			0.97	Ns
Missing			0.96	Ns
Ability tests at 11				
Low			1	
Middle			1.31	<.001
High			1.33	<.001
Missing			1.11	Ns
N	**5780**			
Loglikehood with constant only	7560 (df 5779)			
Loglikelihood with model fitted	7321 (DF 5773)		7300 (df 5759)	

Table 3.2.1a: Men – Logistic regression equations for skill improvements in the last ten years – writing

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.45	<.01	0.46	<.01	0.40	<.01
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.23	<.01	1.26	<.01	1.19	<.05
Non-completers	2.30	<.001	2.41	<.001	2.02	<.01
Sub-degree	1.98	<.001	2.03	<.001	1.66	<.001
Mature degree	4.67	<.001	4.83	<.001	3.99	<.001
Degree & higher	2.92	<.001	3.02	<.001	2.35	<.001
Missing	1.20	Ns	1.99	Ns	1.25	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.11	Ns	1.06	Ns
Service			1.08	Ns	0.99	Ns
Missing			0.91	Ns	0.87	Ns
Mother's education						
By age 15			1		1	
Aged over 16			1.00	Ns	0.98	Ns
Missing			1.17	Ns	1.20	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			0.86	Ns	0.88	Ns
Missing			0.93	Ns	0.95	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			0.98	Ns	0.98	Ns
Free school meals			1.17	Ns	1.28	Ns
Over-crowded & free school meals			0.86	Ns	0.95	Ns
Missing			0.99	Ns	1.03	Ns
Ability tests at 11						
Low			1		1	
Middle			0.92	Ns	0.83	<.05
High			0.84	Ns	0.71	<.001
Missing			1.10	Ns	0.99	Ns

/continued

Table 3.2.1a continued: Men – Logistic regression equations for skill improvements in the last ten years – writing

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.40	<.05
Protective services					2.76	<.001
Skilled manual					0.94	Ns
Clerical					1.57	<.01
Cultural industries					1.81	<.01
Other associated professions					1.68	<.05
Associated professions in health & education					1.16	Ns
Associated professions in science					1.87	<.001
Legal & business professions					1.99	<.01
Health & education professions					1.47	<.05
Science professions					1.94	<.001
Services: owners & managers					1.31	<.05
Corporate managers					2.69	<.001
Missing					1.59	<.01
Unemployment						
None					1	
One year					0.72	<.05
Two to three years					0.80	Ns
Four or more					0.81	Ns
Missing					0.93	Ns
N	**5110**					
Loglikelihood with constant fitted	6817 (df 5110)					
Loglikelihood with model fitted	6606 (df 5103)		6591 (df 5089)		6446 (df 5071)	

Table 3.2.1b: Men – Logistic regression equations for skill improvements in the last ten years – computing

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.38	<.001	0.22	<.001	0.13	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	2.05	<.001	1.71	<.001	1.50	<.001
Non-completers	4.81	<.001	3.20	<.001	1.99	<.01
Sub-degree	4.66	<.001	3.76	<.001	2.60	<.001
Mature degree	10.47	<.001	7.38	<.001	3.97	<.001
Degree & higher	7.07	<.001	4.48	<.001	2.52	<.001
Missing	0.98	Ns	1.05	Ns	1.05	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.33	<.001	1.25	<.05
Service			1.40	<.001	1.25	<.05
Missing			1.04	Ns	1.01	Ns
Mother's education						
By age 15			1		1	
Aged over 16			1.13	Ns	1.09	Ns
Missing			1.14	Ns	1.15	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			0.99	Ns	1.01	Ns
Missing			1.05	Ns	1.09	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			0.81	Ns	0.86	Ns
Free school meals			0.74	Ns	0.82	Ns
Over-crowded & free school meals			0.62	<.05	0.73	Ns
Missing			0.84	Ns	0.85	Ns
Ability tests at 11						
Low			1		1	
Middle			1.76	<.001	1.59	<.001
High			2.44	<.001	1.98	<.001
Missing			1.99	<.001	1.86	<.001

/continued

9

Table 3.2.1b continued: Men – Logistic regression equations for skill improvements in the last ten years – computing

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.79	<.001
Protective services					2.33	<.001
Skilled manual					1.07	Ns
Clerical					7.24	<.001
Cultural industries					2.63	<.001
Other associated professions					2.99	<.001
Associated professions in health & education					0.96	Ns
Associated professions in science					10.62	<.001
Legal & business professions					2.22	<.01
Health & education professions					3.97	<.001
Science professions					5.50	<.001
Services: owners & managers					2.32	<.001
Corporate managers					5.74	<.001
Missing					2.69	<.001
Unemployment						
None					1	
One year					0.72	<.05
Two to three years					0.80	Ns
Four or more					0.94	Ns
Missing					0.67	<.05
N	**5077**					
Loglikelihood with constant fitted	6936 (df 5076)					
Loglikelihood with model fitted	6234 (df 5070)		6074 (df 5056)		5571 (df 5038)	

Table 3.2.1c: Men – Logistic regression equations for skill improvements in the last ten years – maths

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.53	<.001	0.54	<.001	0.48	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.10	Ns	1.16	Ns	1.09	Ns
Non-completers	0.83	Ns	0.94	Ns	0.81	Ns
Sub-degree	1.32	<.001	1.42	<.001	1.21	Ns
Mature degree	1.14	Ns	1.30	Ns	1.13	Ns
Degree & higher	0.78	<.01	0.90	Ns	0.73	<.01
Missing	1.09	Ns	1.08	Ns	1.05	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			0.99	Ns	0.94	Ns
Service			0.85	Ns	0.79	<.05
Missing			1.08	Ns	1.05	Ns
Mother's education						
By age 15			1		1	
Aged over 16			1.10	Ns	1.08	Ns
Missing			0.88	Ns	0.88	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			1.01	Ns	1.01	Ns
Missing			0.96	Ns	0.97	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.10	Ns	1.10	Ns
Free school meals			1.24	Ns	1.32	<.05
Over-crowded & free school meals			1.01	Ns	1.12	Ns
Missing			1.14	Ns	1.15	Ns
Ability tests at 11						
Low			1		1	
Middle			1.00	Ns	0.95	Ns
High			1.78	<.001	0.71	<.001
Missing			0.95	Ns	0.91	Ns

/continued

Table 3.2.1c continued: Men – Logistic regression equations for skill improvements in the last ten years – maths

	Model 1			Model 2		Model 3	
	Odds ratio	P			P	Odds ratio	P
Occupation							
Semi-skilled and unskilled						1	
Personal services & retail						1.52	<.01
Protective services						0.88	Ns
Skilled manual						1.15	Ns
Clerical						1.47	<.01
Cultural industries						0.83	Ns
Other associated professions						1.76	<.01
Associated professions in health & education						0.83	Ns
Associated professions in science						1.43	<.01
Legal & business professions						2.97	<.05
Health & education professions						1.43	<.001
Science professions						1.46	<.05
Services: owners & managers						1.68	<.001
Corporate managers						1.83	<.001
Missing						1.19	Ns
Unemployment							
None						1	
One year						1.14	Ns
Two to three years						0.93	Ns
Four or more						0.49	<.001
Missing						0.91	Ns
N	5024						
Loglikelihood with constant fitted	6526 (df 5023)						
Loglikelihood with model fitted	6502 (df 5017)		6479 (df 5003)			6416 (df 4989)	

Table 3.2.1d: Women – Logistic regression equations for skill improvements in the last ten years – writing

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds Ratio	P
Constant	0.27	<.001	0.31	<.001	0.32	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.21	Ns	1.39	<.01	1.18	Ns
Non-completers	2.49	<.001	2.10	<.001	2.50	<.01
Sub-degree	1.60	<.001	1.78	<.001	1.51	<.001
Mature degree	4.04	<.001	4.69	<.001	3.23	<.001
Degree & higher	2.48	<.001	2.96	<.001	1.84	<.001
Missing	1.08	Ns	1.09	Ns	1.08	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			0.98	<.001	0.93	Ns
Service			1.09	<.001	1.02	Ns
Missing			0.96	<.001		Ns
Mother's education						
By age 15			1		1	
Aged over 16			0.83	<.05	0.94	<.05
Missing			1.03	Ns	0.82	Ns
Mother's interest at 11						
Very interested			1.10		1	
Not very interested			1.09	Ns	0.10	Ns
Missing			1.13	Ns	1.14	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.55	Ns	1.10	Ns
Free school meals			1.44	<.01	1.18	<.001
Over-crowded & free school meals			1.45	Ns	1.70	<.05
Missing			0.74	<.001	1.57	<.001
Ability tests at 11						
Low			1		1	
Middle			0.74	<.01	1.42	<.001
High			0.74	<.01	0.68	<.001
Missing			0.57	<.001	0.68	<.001

/continued

Table 3.2.1d continued: Women – Logistic regression equations for skill improvements in the last ten years - writing

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.33	<.05
Protective services					3.22	<.001
Skilled manual					1.53	Ns
Clerical					1.58	<.001
Cultural industries					2.35	<.01
Other associated professions					2.90	<.001
Associated professions in health & education					1.29	Ns
Associated professions in science					1.76	Ns
Legal & business professions					4.01	<.001
Health & education professions					1.98	<.001
Science professions					4.33	<.001
Services: owners & managers					2.16	<.001
Corporate managers					3.02	<.001
Missing					1.58	<.01
Unemployment						
None					1	
One year					1.05	Ns
Two to three years					0.64	Ns
Four or more					0.21	<.001
Missing					0.70	<.01
Economic inactivity						
None					1	
1-3 years					0.59	<.001
4-6 years					0.50	<.001
7 or more					0.46	<.001
Missing					Aliased	
N	5370					
Loglikehood with constant fitted	6148 (df 5369					
Loglikelihood with model fitted	6052 (df 5363)		5971 (df 5349)		5763 (df 5331)	

Table 3.2.1e: Women – Logistic regression equations for skill improvements in the last ten years – computing

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.41	<.001	0.23	<.001	0.12	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	2.20	<.001	1.72	<.001	1.28	<.05
Non-completers	3.03	<.001	2.18	<.01	2.10	<.01
Sub-degree	1.38	<.001	1.21	Ns	1.14	Ns
Mature degree	2.87	<.001	2.22	<.01	1.42	Ns
Degree & higher	3.32	<.001	2.33	Ns	1.48	<.01
Missing	0.91	Ns	0.86	Ns	1.08	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.14	Ns	1.00	Ns
Service			1.10	Ns	0.95	Ns
Missing			0.94	Ns	0.91	Ns
Mother's education						
By age 15			1		1	
Aged over 16			0.97	Ns	0.99	Ns
Missing			1.22	Ns	1.19	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			0.98	Ns	1.06	Ns
Missing			1.05	Ns	1.03	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			0.98	Ns	1.11	Ns
Free school meals			0.64	<.01	0.86	Ns
Over-crowded & free school meals			0.93	Ns	1.26	Ns
Missing			1.10	Ns	1.03	Ns
Ability tests at 11						
Low			1		1	
Middle			1.79	<.001	1.36	<.01
High			2.66	<.001	1.88	<.001
Missing			1.44	<.01	1.21	Ns

/continued

Table 3.2.1e continued: Women – Logistic regression equations for skill improvements in the last ten years – computing

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.83	<.001
Protective services					2.31	Ns
Skilled manual					1.36	Ns
Clerical					9.72	<.001
Cultural industries					2.79	<.001
Other associated professions					8.64	<.001
Associated professions in health & education					1.90	<.01
Associated professions in science					15.02	<.001
Legal & business professions					7.67	<.001
Health & education professions					5.33	<.001
Science professions					7.98	<.001
Services: owners & managers					4.41	<.001
Corporate managers					12.14	<.001
Missing					2.61	<.001
Unemployment						
None						
One year					0.69	<.05
Two to three years					0.66	Ns
Four or more					0.54	Ns
Missing					0.37	<.001
Economic inactivity						
None					1	
1-3 years					0.62	<.001
4-6 years					0.47	<.001
7 or more					0.25	<.001
Missing					Aliased	
N	5281					
Loglikelihood with constant fitted	6857 (df 5280)					
Loglikelihood with model fitted	6633 (df 5274)		6492 (df 5260)		5549 (df 5239)	

Table 3.2.1f: Women – Logistic regression equations for skill improvements in the last ten years – maths

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.30	<.001	0.25	<.001	0.22	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.02	Ns	1.03	Ns	0.87	Ns
Non-completers	1.36	Ns	1.42	Ns	1.21	Ns
Sub-degree	1.21	<.05	1.22	<.05	1.12	Ns
Mature degree	1.19	Ns	1.19	Ns	0.83	Ns
Degree & higher	0.86	Ns	0.89	Ns	0.63	<.01
Missing	1.01	Ns	1.03	Ns	1.06	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			0.89	Ns	0.83	Ns
Service			0.88	Ns	0.81	Ns
Missing			0.94	Ns	0.91	Ns
Mother's education						
By age 15			1		1	
Aged over 16			0.93	Ns	0.93	Ns
Missing			1.06	Ns	1.05	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			1.14	Ns	1.17	Ns
Missing			1.14	Ns	1.16	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.24	Ns	1.34	<.05
Free school meals			1.10	Ns	1.23	Ns
Over-crowded & free school meals			1.05	Ns	1.15	Ns
Missing			1.02	Ns	1.00	Ns
Ability tests at 11						
Low			1		1	
Middle			1.22	<.05	1.08	Ns
High			1.20	Ns	1.01	Ns
Missing			0.92	Ns	0.85	Ns

/continued

17

Table 3.2.1f continued: Women – Logistic regression equations for skill improvements in the last ten years – maths

	Model 1		Model 2		Model 3	
	Odds ratio	**P**		**P**	**Odds ratio**	**P**
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.36	<.05
Protective services					1.26	Ns
Skilled manual					1.10	Ns
Clerical					2.14	<.001
Cultural industries					2.21	<.01
Other associated professions					2.91	<.001
Associated professions in health & education					1.33	Ns
Associated professions in science					1.34	Ns
Legal & business professions					3.24	<.001
Health & education professions					2.16	<.001
Science professions					1.37	<.001
Services: owners & managers					3.17	ns
Corporate managers					2.93	<.001
Missing					1.51	<.05
Unemployment						
None					1	
One year					1.27	Ns
Two to three years					0.97	Ns
Four or more					0.53	Ns
Missing					0.54	<.001
Economic inactivity						
None					1	
1-3 years					0.78	<.01
4-6 years					0.62	<.001
7 or more					0.51	<.001
Missing					Aliased	
N	5221					
Loglikelihood with constant fitted	5695 (df 5220)					
Loglikelihood with model fitted	5687 (df 5214)		5670 (df 5200)		5485 (df 5182)	

Table 3.2.2a: Men – Logistic regression equations for skill improvements in the last ten years – organising

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.71	<.001	0.46	<.001	0.29	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.55	<.001	1.33	<.001	1.18	<.05
Non-completers	2.44	<.001	1.81	<.01	1.49	Ns
Sub-degree	2.64	<.001	2.21	<.001	1.63	<.001
Mature degree	2.57	<.001	1.94	<.01	1.81	<.05
Degree & higher	3.45	<.001	2.44	<.001	1.57	<.001
Missing	0.90	Ns	0.97	Ns	0.98	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.26	<.01	1.07	Ns
Service			1.60	<.001	1.36	<.01
Missing			1.57	<.001	1.37	<.05
Mother's education						
By age 15			1		1	
Aged over 16			1.14	Ns	1.08	Ns
Missing			0.80	Ns	0.85	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			1.17	Ns	1.25	<.05
Missing			1.03	Ns	1.05	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			0.78	Ns	0.78	Ns
Free school meals			0.68	<.01	0.82	Ns
Over-crowded & free school meals			0.74	Ns	0.91	Ns
Missing			1.04	Ns	1.07	Ns
Ability tests at 11						
Low			1		1	
Middle			1.59	<.001	1.45	<.001
High			1.71	<.001	1.19	<.001
Missing			1.29	<.05	2.22	Ns

/continued

Table 3.2.2a continued: Men – Logistic regression equations for skill improvements in the last ten years – organising

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					2.22	<.001
Protective services					1.61	<.01
Skilled manual					1.62	<.001
Clerical					1.40	<.05
Cultural industries					3.17	<.001
Other associated professions					1.92	<.01
Associated professions in health & education					3.68	<.001
Associated professions in science					1.07	Ns
Legal & business professions					5.86	<.001
Health & education professions					4.15	<.001
Science professions					1.61	<.01
Services: owners & managers					10.15	<.001
Corporate managers					7.40	<.001
Missing					1.79	<.001
Unemployment						
None					1	
One year					0.53	<.001
Two to three years					0.75	Ns
Four or more					0.58	<.01
Missing					0.80	Ns
N	5012					
Loglikelihood with constant fitted	6943 (df 5011)					
Loglikelihood with model fitted	6668 (df 5005)		6549 (df 4991)		5999 (df 4973)	

Table 3.2.2b: Men – Logistic regression equations for skill improvements in the last ten years – instructing and teaching

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	1.40	<.001	1.18	Ns	0.86	Ns
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.66	<.001	1.55	<.001	1.39	<.001
Non-completers	1.98	<.01	1.72	Ns	1.42	Ns
Sub-degree	2.23	<.001	2.03	<.001	1.55	<.001
Mature degree	2.80	<.001	2.42	<.01	1.80	Ns
Degree & higher	2.28	<.001	1.94	<.001	1.25	Ns
Missing	0.90	Ns	0.93	Ns	0.93	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.01	Ns	0.95	Ns
Service			1.08	Ns	0.96	Ns
Missing			1.00	Ns	0.94	Ns
Mother's education						
By age 15			1		1	
Aged over 16			1.04	Ns	1.01	Ns
Missing			1.09	Ns	1.12	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			1.01	Ns	1.05	Ns
Missing			1.03	Ns	1.04	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.05	Ns	1.07	Ns
Free school meals			0.98	Ns	1.10	Ns
Over-crowded & free school meals			0.79	Ns	0.86	Ns
Missing			1.12	Ns	1.15	Ns
Ability tests at 11						
Low			1		1	
Middle			1.39	<.001	1.28	<.01
High			1.44	<.001	1.28	<.01
Missing			1.09	Ns	1.01	Ns

/continued

Table 3.2.2b continued: Men – Logistic regression equations for skill improvements in the last ten years - instructing and teaching

	Model 1			Model 2		Model 3	
	Odds ratio	P			P	Odds ratio	P
Occupation							
Semi-skilled and unskilled						1	
Personal services & retail						1.67	<.001
Protective services						2.09	<.001
Skilled manual						1.46	<.001
Clerical						1.34	<.05
Cultural industries						1.72	<.05
Other associated professions						2.23	<.001
Associated professions in health & education						7.32	<.001
Associated professions in science						1.86	<.001
Legal & business professions						2.33	<.01
Health & education professions						5.94	<.001
Science professions						1.89	<.001
Services: owners & managers						2.12	<.001
Corporate managers						2.33	<.001
Missing						1.62	<.01
						0.91	<.01
Unemployment							
None						1	
One year						0.90	Ns
Two to three years						0.50	Ns
Four or more						0.86	<.001
Missing							Ns
N	5029						
Loglikelihood with constant fitted	6465 (df 5028)						
Loglikelihood with model fitted	6317 (df 5022)		6287 (df 5008)			6162 (df 4990)	

Table 3.2.2c: Men – Logistic regression equations for skill improvements in the last ten years – advising and counselling

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	1.51	<.001	1.16	Ns	0.92	Ns
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.43	<.001	1.32	<.001	1.20	<.05
Non-completers	1.66	<.05	1.48	Ns	1.24	Ns
Sub-degree	2.10	<.001	1.91	<.001	1.45	<.001
Mature degree	2.83	<.001	2.43	<.01	1.90	<.05
Degree & higher	2.60	<.001	2.25	<.001	1.51	<.01
Missing	1.01	Ns	1.08	Ns	1.09	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			1.09	Ns	1.01	Ns
Service			1.31	<.05	1.14	Ns
Missing			1.16	Ns	1.07	Ns
Mother's education						
By age 15			1		1	
Aged over 16			1.05	Ns	1.01	Ns
Missing			0.98	Ns	1.01	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			1.17	Ns	1.23	<.05
Missing			1.03	Ns	1.04	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.05	Ns	1.10	Ns
Free school meals			0.79	Ns	0.88	Ns
Over-crowded & free school meals			0.63	<.01	0.70	Ns
Missing			1.13	Ns	1.18	Ns
Ability tests at 11						
Low			1		1	
Middle			1.48	<.001	1.31	<.001
High			1.26	<.001	1.06	Ns
Missing			1.03	<.01	0.92	Ns

/continued

Table 3.2.2c continued: Men – Logistic regression equations for skill improvements in the last ten years – advising and counselling

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.98	<.001
Protective services					3.47	<.001
Skilled manual					1.23	<.05
Clerical					1.55	<.01
Cultural industries					2.36	<.001
Other associated professions					1.89	<.01
Associated professions in health & education					9.57	<.001
Associated professions in science					1.59	<.01
Legal & business professions					3.12	<.001
Health & education professions					3.52	<.001
Science professions					1.73	<.01
Services: owners & managers					2.19	<.001
Corporate managers					2.95	<.001
Missing					1.35	Ns
Unemployment						
None					1	
One year					1.02	Ns
Two to three years					0.90	Ns
Four or more					0.44	<.001
Missing					0.86	Ns
N	5038					
Loglikelihood with constant fitted	6395 (df 5037)					
Loglikelihood with model fitted	6252 (df 5031)		6202 (df 5017)		6031 (df 5003)	

Table 3.2.2d: Men – Logistic regression equations for skill improvements in the last ten years – caring

	Model 1		Model 2		Model 3	
	Odds ratio	P	Odds ratio	P	Odds ratio	P
Constant	0.39	<.001	0.37	<.001	0.37	<.001
Education level						
Below A-level	1		1		1	
A-level & equivalent	1.00	Ns	0.98	Ns	1.02	Ns
Non-completers	0.91	Ns	0.89	Ns	0.92	Ns
Sub-degree	1.19	Ns	1.15	Ns	1.05	Ns
Mature degree	1.60	Ns	1.54	Ns	1.37	Ns
Degree & higher	1.41	<.001	1.32	<.01	1.01	Ns
Missing	1.23	Ns	1.25	Ns	1.28	Ns
Father's occupation at 16						
Manual			1		1	
Intermediate			0.98	Ns	0.10	Ns
Service			1.30	<.01	1.23	Ns
Missing			1.28	<.05	1.23	Ns
Mother's education						
By age 15			1			
Aged over 16			1.04	Ns	1.02	Ns
Missing			0.99	Ns	1.01	Ns
Mother's interest at 11						
Very interested			1		1	
Not very interested			0.85	Ns	0.88	Ns
Missing			0.92	Ns	0.94	Ns
Poverty at 11						
Not over-crowded or free school meals			1		1	
Over-crowded			1.02	Ns	1.04	Ns
Free school meals			1.03	Ns	1.06	Ns
Over-crowded & free school meals			0.97	Ns	0.93	Ns
Missing			0.94	Ns	0.96	Ns
Ability tests at 11						
Low			1		1	
Middle			1.01	Ns	0.96	Ns
High			0.96	Ns	0.92	Ns
Missing			1.02	Ns	0.95	Ns

/continued

Table 3.2.2d continued: Men – Logistic regression equations for skill improvements in the last ten years – caring

	Model 1		Model 2		Model 3	
	Odds ratio	P		P	Odds ratio	P
Occupation						
Semi-skilled and unskilled					1	
Personal services & retail					1.12	Ns
Protective services					3.17	<.001
Skilled manual					0.76	<.01
Clerical					0.79	Ns
Cultural industries					1.37	Ns
Other associated professions					0.84	Ns
Associated professions in health & education					9.62	<.001
Associated professions in science					0.72	Ns
Legal & business professions					1.32	Ns
Health & education professions					3.74	<.001
Science professions					0.86	Ns
Services: owners & managers					1.06	Ns
Corporate managers					0.98	Ns
Missing					1.24	Ns
Unemployment						
None					1	
One year					0.92	Ns
Two to three years					1.39	Ns
Four or more					1.20	Ns
Missing					1.09	Ns
N	5048					
Loglikelihood with constant fitted	6143 (DF 5047)					
Loglikelihood with model fitted	6123 (df 5041)		6104 (df 5027)		5891 (df 5009)	