GENDER BIAS IN INCOMES OF ART AND DESIGN GRADUATES

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ABSTRACT

Art and design is an area dominated by female students yet, as graduates, they consistently earn less than males. Research drawing on information provided by nearly 2000 art and design graduates reveals that there are significant variations in income between different subject areas within art and design. However, taking into account other variables that impact on income — subject area, year of graduation and age — males earn significantly higher salaries than females.

Introduction

Art and design is an area that is dominated by female students. Nationally, there are about twice as many female art and dresign students as males. However, they are not evenly distributed within the different art and design areas. For example, fashion and textiles is overwhelmingly female while industrial, product and furniture design is predominantly male.

Art and design, overall, is not an area that leads to high incomes, at least within the first five years after graduation. However, within art and design, there is considerable variation in income of graduates between different subject areas as the results of a major survey of art and design graduates revealed.

The survey

An extensive survey of the careers of 1875 art and design graduates degree courses in 13 different higher education institutions was co-ordinated by the Centre for Research into Quality (CRQ) at the University of Central England in Birmingham. This is the largest recent sector study of graduates that provides longitudinal information about different subject areas within art and design. Amongst other things, the survey examined the career patterns of the graduates and their current incomes.

Figure 1: Respondents by main subject area

Subject area	*N*	*%*	*Valid %*	*Subpop-ulation %*	*Sub-sample %*
3-D design	266	14.2	**14.4**	14.4	15.9
Fashion and textiles	283	15.1	**15.3**	10.0	13.5
Fine art	460	24.5	**24.9**	22.7	24.5
Graphic design & visual communications	366	19.5	**19.8**	16.6	19.7
Photography, film or television	137	7.3	**7.4**	11.7	8.8
Product, industrial or furniture design	96	5.1	**5.2**	5.8	5.1
Interior design	64	3.4	**3.5**	1.3	3.1
Other art and design	179	9.5	**9.7**	17.6	9.5
No information	*24*	*1.3*	*Missing*		
Total	1875	100.0	100.0		

The sub-population figure refers to the percentage of the total graduates from a subgroup of institutions able to furnish information on the subject area of all their graduates over the period 1993–6. The encompasses a total of 5358 graduates. The sub-sample figures are the corresponding percentages in the sample from those institutions, and account for a total of 1439 respondents.

In all, 25% of the respondents were fine art students, 20% from graphic design and visual communications, 15% from fashion and textiles and 14% from three-dimensional design. The reamining 26% of graduates were from photography, film or

television, product, industrial or furniture design, interior design or from a variety of other art and design subjects (Figure 1).

A comparison of sample percentages with available population percentages, from a sub-group of institutions shows a remarkably high degree of agreement between the sample proportions and population data. For example, 14.4% of the total sample are 3-D design graduates. Some institutions in the population were able to provide information on the subject areas of all their graduates from 1993-6. Of the 5358 graduates from those institutions, 14.4% were 3-D design graduates. Furthermore, a sub-sample of 1439 graduates from the same institutions that provided the population data reveals that 15.9% of the sub-sample are 3-D design graduates. The proportions for other subject areas also match well (with the exception of 'other' art and design graduates). This suggests that the survey sample is a good representation of the spread of subject areas within art and design (Figure 1). [1]

The sample consisted of students who successfully graduated from designated courses at the 13 institutions between 1993 and 1996. There are approximately twice as many graduates in the sample who graduated in 1996 (34%) than in 1993 (16%). This reflects, in part, the difficulty of contacting graduates the longer it has been since they graduated but also reflects the expansion in numbers of those years (Figure 2). A comparison of the sub-population and sub-sample proportions for each year of graduation suggests that the survey sample is a good representation of the proportions graduating each year between 1993 and 1996.

Figure 2: Respondents by year graduated from the programme of study

End year	*N*	*%*	*Valid %*	*Subpop-ulation %*	*Sub-sample %*
1993	308	16.4	**16.7**	16.7	18.9
1994	399	21.3	**21.6**	24.0	20.9
1995	516	27.5	**27.9**	28.5	27.4
1996	625	33.3	**33.8**	30.6	32.8
No information	*27*	*1.4*	*Missing*		
Total	**1875**	**100.0**	**100.0**		

The sub-population figure refers to the percentage of the total graduates from a subgroup of institutions able to furnish information on total numbers graduating over the period 1993–6. The encompasses a total of 5048 graduates. The sub-sample figures are the corresponding percentages in the sample from those institutions, and account for a total of 1649 respondents.

Just over half the sample had first-class (10%) or upper-second-class (45%) degrees. However, the sample included 8% with third-class or pass degrees (Figure 3).

Figure 3: Respondents by degree classification

Classification	*N*	*%*	*Valid %*	*Subpop-ulation %*	*Sub-sample %*
First	180	9.6	**9.7**	13.3	9.0
Upper Second	834	44.5	**44.9**	34.5	42.1
Lower Second	700	37.3	**37.7**	38.3	40.1
Third	128	6.8	**6.9**	13.3	8.1
Pass	16	0.9	**.9**	0.6	0.7
No information	*17*	*.9*	*Missing*		
Total	**1875**	**100.0**	**100.0**		

A comparison of the sub-population and sub-sample proportions of graduates in each degree classification category suggests a reasonably good fit. First-class and third-class degree respondents are slightly under-represented and upper-second-class respondents and lower-second-class respondents are slightly over-represented. [2]

[1] A comparison with HESA first-destinations statistics suggests that 17% of all art and design graduates are fine artists and 65% are design students of various types. For those institutions participating in the study, the proportions in these two categories are slightly higher (19% and 69% respectively).

[2] There was no significant difference in the distribution of degree classifications in the different subject areas. There were marginally more first-class degrees in photography, film and video than other areas and interior design was the only area with significantly more lower-second class degrees than upper-seconds. There is a remarkable consistency in the distribution of degree classifications for each year of graduation.

Figure 4: Respondents by gender and age

Age / *Gender*	*21–25*	*26–35*	*36 or over*	**Total**
Male	523	104	42	669
	78.2	*15.5*	*6.3*	*36.1*
Female	913	105	164	1182
	77.2	*8.9*	*13.9*	*63.9*
Total	**1436**	**209**	**206**	**1851**
	77.6	***11.3***	***11.1***	***100.0***

No information is available on the gender of 13 respondents nor the age of 19 respondents.

Nearly two-thirds (64%) of the respondents are female and 78% are under 26 years of age. There is a slightly higher proportion of females in the oldest age group and a higher proportion of males in the 26–35 year-old group (Figure 4). Art and design tends to be an area in which ethnic minority students are underrepresented. In keeping with this, the vast majority of the sample described their ethnic origin as 'White' (91%). Class distribution in art and design broadly reflects the distribution of students within higher education, 43% of the sample indicated that they are lower-middle class while the rest were divided fairly evenly between those who described themselves as working class (29%) and those who are upper-middle class or upper class (28%).

An analysis of the breakdowns within the sample and the comparison of sub-population and sub-sample characteristics suggest that the *Destinations and Reflections* sample is representative of the students graduating with degrees in art and design from the participating institutions between 1993 and 1996.

Income range

The estimated average income of the respondents in thesurvey is £12,470.[3] Given that some respondents graduated five years ago, this is indicative that art and design graduates do not tend to earn high salaries in the first few years after graduating. The longer the time since graduation, the more art and design graduates tend to earn. However, in the main, the increases in salary are not dramatic. 65% of the sample claimed to be earning less than £15,000 per annum at the time of the survey, in 1998, and only 6% were earning over £25,000 (Figure 5). 79% of the 1996 graduates have an income less than £15,000 compared to just 54% of the 1993 graduates. Conversely, 1993 graduates (19%) are more than twice as likely to have incomes over £20,000 than 1996 graduates (8%).

[3] Income data was collected by asking to which £5000 income band respondents belonged. Hence mean income for different groups can only be estimated assuming an even distribution of respondents within each income band.

Figure 5: Income by year of graduation

Income £s	1993	1994	1995	1996	Total
N					
%					
0–5,000	44	53	83	129	309
	15.0	*13.9*	*16.9*	*21.6*	*17.5*
5001–10,000	57	68	99	150	374
	19.4	*17.9*	*20.2*	*25.2*	*21.2*
10,001–15,000	58	83	136	191	468
	19.7	*21.8*	*27.7*	*32.0*	*26.6*
15,001–20,000	78	112	114	81	385
	26.5	*29.5*	*23.2*	*13.6*	*21.9*
20,001–25,000	33	29	40	26	128
	11.2	*7.6*	*8.1*	*4.4*	*7.3*
25,001–30,000	8	21	8	9	46
	2.7	*5.5*	*1.6*	*1.5*	*2.6*
Over £30,000	16	14	11	10	51
	5.4	*3.7*	*2.2*	*1.7*	*2.9*
Total	294	380	491	596	1761
	16.7	*21.6*	*27.9*	*33.8*	*100.0*

Chi-Square=106.2, 18 degrees of freedom, p=0.00. Spearman Correlation .18367 p=.00000

Main degree subject

There are considerable and significant variations in income between main degree subjects. Overall, fine art graduates tend to have the lowest incomes, 33% have an income under £5000 and 81% have an income below £15,000. The estimated average income for the fine art graduates is £9,150, which is considerably below the estimated average for the entire sample.

The next lowest group in terms of income are the 3-D designers, whose mean income is estimated as £11,910 and 68% of whom have an income below £15,000.

At the other end of the scale, product, industrial and furniture design graduates and interior design graduates have the highest mean incomes, £16,870. 37% of the interior design graduates and 40% of product, industrial and furniture design graduates earn less than £15,000 (Figure 6).

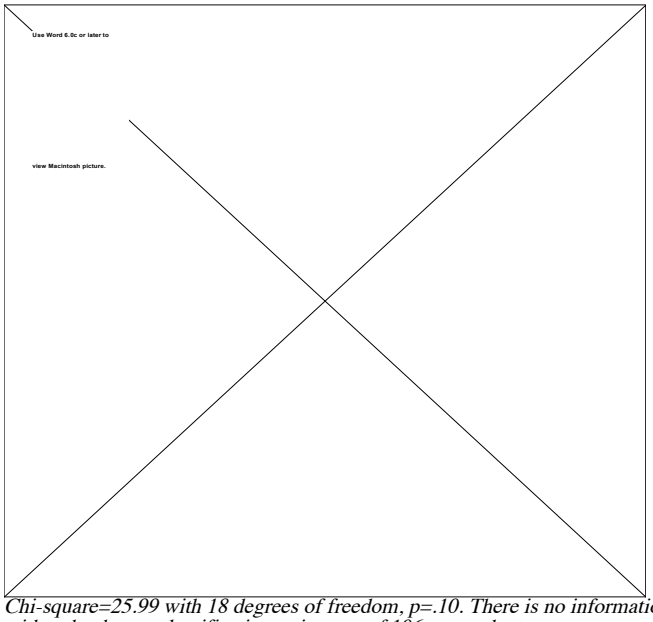
Figure 6 Mean income and income bands (%) by subject area

Subject area	0–5,000	5001–10,000	10,001–15,000	15,001–20,000	20,001–25,000	25,001–30,000	Over £30,000	N	Est. mean (£)
%									
3-D design	17.2	23.8	27.3	23.4	4.3	1.2	2.7	256	11,910
Fashion and textiles	12.8	21.1	36.8	20.7	4.9	2.3	1.5	266	12,330
Fine art	32.6	30.3	18.2	12.1	5.1	0.2	1.4	429	9,150
Graphic design and vis. comm.	11.1	11.1	27.8	29.5	11.6	5.1	3.7	352	14,980
Photography, film or television	12.1	27.3	25.8	20.5	7.6	3.8	3	132	12,880
Product, industrial or furniture design	4.2	14.6	20.8	31.3	14.6	8.3	6.3	96	16,870
Interior design	6.3	3.2	27	38.1	14.3	7.9	3.2	63	16,870
Other	18.6	21.0	29.9	19.8	4.2	1.8	4.8	167	12,230
Total (N)	**312**	**373**	**465**	**385**	**127**	**49**	**50**	**1761**	**12,470**

Income by degree classification

The classification of the final degree has no statistically significant impact on the graduate's income level. However, there is a slight tendency for the proportions of first- and upper-second-class degrees to increase as salary level increases and for the proportions to decrease slightly for lower-seconds and thirds. Overall, the higher the degree classification the larger the proportion of art and design students with a salary in excess of £20,000 (Figure 7).

Figure 7: Percentage of degree classification at each salary level



Chi-square=25.99 with 18 degrees of freedom, p=.10. There is no information on either the degree classification or income of 106 respondents.

Income by social class and ethnicity

There is little evidence of a strong class bias in income. Only in relation to the small numbers of respondents with incomes in excess of £25,000 is there any class differences with the upper-middle-class (9%) three times as likely than the working-class respondents (3%) to have the higher incomes.

There is a significant difference in income for different social classes among fine art graduates, those from the upper-middle class (30%) are twice as likely as those from the lower-middle class (15%) and working class (15%) to have incomes over £15,000.

Product, industrial or furniture design is the only area where ethnic minorities tend to have significantly different incomes, although the sample size is small. All twelve of the respondents from ethnic minorities had an income below £20,000 compared to 64% of the non-ethnic minority graduates.

Income by age

Age also affects the income of art and design graduates. Despite the larger proportion of older graduates in the highest income band, older graduates tend to have lower incomes than younger graduates. Younger graduates (53%) are much more likely to have an income in the range £10–20,000 than older graduates (28%) and older graduates (33%) are more than twice as likely than younger graduates (15%) to have an income under £5000.

There are statistically significant age differences in the income of fine art graduates that goes somewhat counter to the trend for all art and design graduates. Older fine art graduates (13.1%) are much more likely to have an income over £20,000 than those under 36 years of age (4.5%) (Figure 8).

Figure 8: Income by age

Income £s	*21–25*	*26–35*	*36+*	***Totals***
N				
%				
0–5,000	204	48	63	315
	14.7	*24.1*	*33.2*	*17.7*
5001–10,000	279	51	47	377
	20.1	*25.6*	*24.7*	*21.2*
10,001–15,000	393	46	30	469
	28.4	*23.1*	*15.8*	*26.4*
15,001–20,000	336	27	23	386
	24.2	*13.6*	*12.1*	*21.7*
20,001–25,000	97	19	12	128
	7.0	*9.5*	*6.3*	*7.2*
25,001–30,000	39	6	4	49
	2.8	*3.0*	*2.1*	*2.8*
Over £30,000	38	2	11	51
	2.7	1.0	5.8	2.9
Total	**1386**	**199**	**190**	**1775**
	78.1	***11.2***	***10.7***	***100.0***

Chi-Square=80.3, 12 degrees of freedom, p=0.00

Income by gender

Overall, there is a significant relationship between income and gender (Table 10.5). The estimated average income for females is £11,610 compared to £14,060 for males. In part, this reflects gender imbalances in different subject areas: males tend to be over-represented in subject specialisms with higher income levels. However, there are persistent gender differentials that are hard to ignore.

For example, when taking age into account (controlling for age), the gender difference persists. The high earners in the over-35 age group tend to be males, while the low earners in that age group are three times as likely to be females (Figure 9). A similar pattern occurs for the 26–35 age group, with females far less likely than males to be receiving incomes between £15–30,000. Conversely, females in this age group are more likely to have incomes between £5–15,000 than their male counterparts. There is no difference between males and females at the very low income levels in this age group.

Figure 9: Income by age and gender

N	*Males*				*Females*			
%								
Income £s	*21–25*	*26–35*	*36+*	***Total***	*21–25*	*26–35*	*36+*	***Total***
0–5,000	63	24	5	92	140	24	56	220
	12.5	*24.2*	*12.8*	*14.4*	*15.9*	*24.0*	*37.8*	*19.5*
5001–10,000	98	17	11	126	181	34	35	250
	19.5	*17.2*	*28.2*	*19.7*	*20.5*	*34.0*	*23.6*	*22.1*
10,001–15,000	110	20	4	134	283	26	26	335
	21.9	*20.2*	*10.3*	*20.9*	*32.1*	*26.0*	*17.6*	*29.7*
15,001–20,000	132	17	8	157	203	10	15	228
	26.2	*17.2*	*20.5*	*24.5*	*23.0*	*10.0*	*10.1*	*20.2*
20,001–25,000	50	16	5	71	47	3	7	57
	9.9	*16.2*	*12.8*	*11.1*	*5.3*	*3.0*	*4.7*	*5.0*
25,001–30,000	25	4	1	30	14	2	3	19
	5.0	*4.0*	*2.6*	*4.7*	*1.6*	*2.0*	*2.0*	*1.7*
Over £30,000	25	1	5	31	13	1	6	20
	5.0	1.0	12.8	4.8	1.5	1.0	4.1	1.8
Total	**503**	**99**	**39**	**641**	**881**	**100**	**148**	**1129**
	78.5	***15.4***	***6.1***	***100.0***	***78.0***	***8.9***	***13.1***	***100.0***

Both males are females subgroups are statistically significant at p=0.00

In the youngest age group there are proportionately more females with an income between £10–15,000 and more males in the £15–25,000 income bracket. Males (10%) in this age group are significantly more likely than females (4%) to have incomes over £25,000 (Figure 9).

Gender differences, controlling for year of graduation

Income seems to be most affected by gender and year of graduation. Taking year of graduation into account, there is a marked difference in the incomes of male and female graduates ($p>0.05$ in all years) as can be seen, for example, in Figures 10 and 11.

Figure 10: Income by gender for 1993 graduates

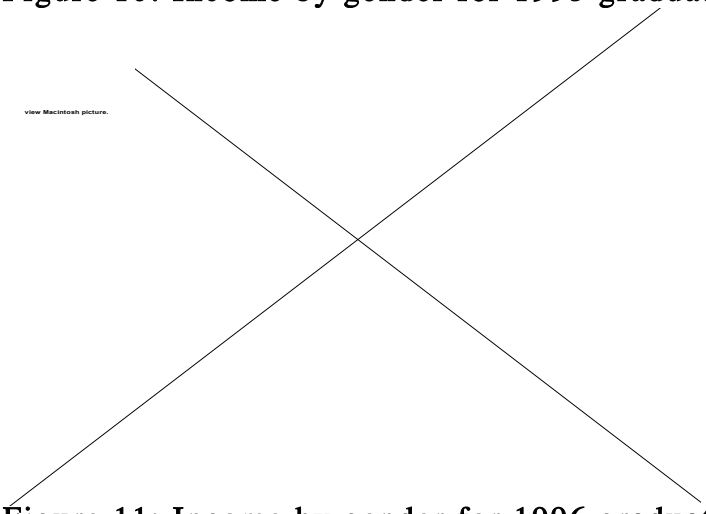
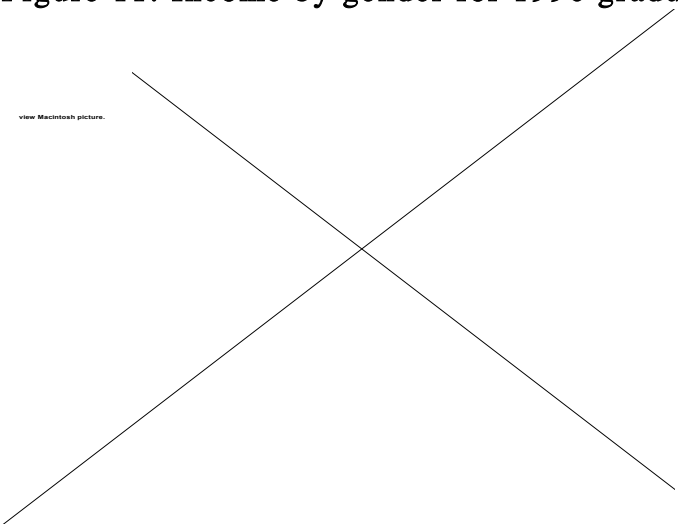


Figure 11: Income by gender for 1996 graduates



Gender differences, controlling for year of graduation *and* main degree subject

There are overall gender differences in income for art and design graduates when year of graduation is taken into account.

However, controlling for both year of graduation *and* main subject area, there remains a significant difference between male and female incomes (Figure 12). In very few areas do females have higher average incomes than males. For example, female interior designers from 1993 and female fine artists who graduated in 1993 and 1994 are rare in having higher average incomes than their male counterparts. Even in areas where the graduates are predominantly female, such as fashion and textiles, males still tend to have higher incomes, with the exception of graduates from 1994.

It is clear, whichever way the data in analysed, that female graduates in art and design attract lower average incomes than their male counterparts. [4]

Figure 12: Estimated mean income for male and female graduates by year of graduation and main subject area

	1993		*1994*		*1995*		*1996*	
Subject area	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
%								
3-D design	17960	15260	13540	11930	12500	11800	10000	8800
Fashion and textiles		13620	10000	***13500***	14170	11990	11670	11060
Fine art	8990	***11000***	8850	***9480***	10060	8510	9010	8490
Graphic design, vis. comm.	19240	15890	18750	14670	15390	14750	12960	12180
Photography, film, television	13500	11000	17500	13970	13960	12780	12500	9790
Product, industrial, furniture design	20000	13750	20630	16250	15750	10830	12500	9170
Interior design	15000	***19500***	23750	20500	16670	15740	18220	14170
Other	20000	11140	21670	13030	16790	11810	13750	9420
All	**15460**	**13300**	**16400**	**12540**	**13870**	**11700**	**11990**	**10080**

F=48.82, p=0.00. Italicised bold cells are those where females have higher average salaries than males.

Summary and conclusion

Art and design graduates are not particularly high income earners in their first four years after graduation: 65% of the sample claim to be earning less than £15,000 per annum and only 5.6% are earning over £25,000. Interior design and product, industrial and furniture design students tend to have the highest incomes and fine art students the lowest.

The longer it has been since graduation, the higher respondents' income tends to be. Over three quarters of the 1996 graduates have an income less than £15,000 compared to just over half the 1993 graduates. Conversely, 1993 graduates are more than twice as likely to have incomes over £20,000 than 1996 graduates.

Age has some bearing on income of art and design graduates. Older graduates (14.2%) are more likely than younger graduates to have an income over £20,000. This is particularly significant amongst fine art graduates. However, older graduates are more than twice as likely than younger graduates to have an income under £5000.

There is little evidence of a strong class bias in income: upper-middle-class respondents are three times as likely than working-class respondents to have incomes in excess of £25,000, although overall numbers in this group are small. Amongst fine artists, the upper-middle class tend to have significantly higher incomes. The classification of the final degree has no statistically significant impact on the graduate's income level.

However, a larger proportion of males earn higher salaries than females in all subject areas. Furthermore, controlling for year of graduation *and* subject area, males have significantly higher incomes than females.

[4] Analysing the data controlling for age as well as year of graduation and main subject area confirms the gender differences.