

# For Love or Money?

Graduate motivations and the economic returns of creative higher education inside and outside the creative industries

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## Summary

This report examines the value of creative higher education by investigating the relationship between a range of creative subjects and graduate outcomes in the creative industries. By assessing employment and earnings outcomes for creative graduates in specific sectors of the economy, and by incorporating graduates' motivations to enter work into this analysis, the report presents a nuanced picture of the economic value of creative higher education.

## Key findings

- **Employment rates demonstrate that creative graduates are integral to the creative industries.** While creative graduates make up only 17 per cent of the graduate population, they represent 46 per cent of graduates working in the creative industries. This figure is even higher in certain sub-sectors. For example, 82 per cent of graduates working in design, 78 per cent in music, performing and visual arts and 75 per cent in architecture have a creative degree. This reflects the creative industries' reliance on creative graduates.
- **Creative higher education provides graduates with the skills needed to gain employment in their chosen career.** 52 per cent of creative graduates are in some kind of creative work (either working in the creative industries or working in creative jobs outside of the creative industries). Moreover, 73 per cent of creative graduates working in the creative industries report that they took their job, at least in part, because it was exactly the type of job they wanted or it fitted into their career plans. This compares with only 66 per cent of non-creative graduates working in the creative industries and 66 per cent of non-creative graduates working elsewhere in the economy.
- **All graduates earn more, on average, when working in the creative industries than when working outside the creative industries.** Creative graduates earn, on average, approximately £2,300 more a year when working in the creative industries compared with creative graduates working outside the creative industries. And non-creative graduates earn, on average, approximately £1,300 a year more when working in the creative industries compared with non-creative graduates working outside the creative industries.
- **Creative graduates earn less than non-creative graduates, in a binary comparison, both outside and inside the creative industries.** Creative graduates earn less than non-creative graduates across the economy, with a larger gap between creative and non-creative graduate earnings found for those working in the creative industries. This suggests that the creative industries are both paying creative graduates well relative to other sectors and poorly relative to other graduates.
- **Differences in earnings between creative and non-creative graduates can be partially explained by differences in the motivation profiles of these two groups.** There are considerable differences in the motivations creative and non-creative graduates have for entering work, which correlate with variance in graduate earnings and suggest that motivation factors are augmenting market equilibrium for creative graduates. Creative graduates' overwhelming preference to work in the creative industries means that creative industries employers are not needing to use pay to attract and retain creative graduates in the same way they do for non-creative graduates. These differing motivation patterns help explain why the gap between creative and non-creative graduate earnings is greater amongst those engaged in creative work.

- **Creative graduates are more likely to be self-employed, freelance or running their own business than non-creative graduates, which is likely to produce an underestimation of their earnings.** Creative graduates are over three times more likely to be self-employed, freelance or running their own business than non-creative graduates and over a quarter of all creative graduates who work in the creative industries are engaged in this type of work. There is also evidence of a relationship between low earnings outcomes and working self-employed, freelance or running a business in the creative industries for creative graduates, which is not evident for non-creative graduates. This suggests that creative graduates may be systematically disadvantaged in salary-based measures of

value, as accurate earnings data for these types of workers is difficult to capture.

- **Creative higher education is performing as well or better than many other specific subjects on multiple measures of graduate outcomes.** As select examples, three and a half years after graduation a higher proportion of creative graduates are in 'graduate level jobs' than law, biology and psychology graduates and when controlling for demographic, attainment and work related characteristics, there is no statistical difference in the effect on average earnings between studying a creative subject and studying biology, languages, or psychology subjects.

These findings suggest that creative higher education is providing graduates with the high-level creative skills necessary to work in the creative industries and in creative roles across the economy. This implies that creative higher education is providing good value to students in equipping them with the tools they need to enter their chosen careers. The findings also suggest that creative higher education is providing good value to the Exchequer by supplying appropriately skilled employees to the creative industries, a particularly high-growth sector of the economy, and by supporting creativity in other sectors. Moreover, the findings suggest that using earnings as a metric for value, disadvantages creative graduates who have very different motivation profiles for entering work and are also more likely to be self-employed, operate as freelancers or run their own businesses than non-creative graduates.

Taken together, these findings demonstrate that creative higher education is providing creative graduates with the high-level skills required to work in their chosen careers, but that these skills are not being remunerated at the same level as non-creative graduates who have different motivations for entering work and who work in different forms of employment. This implies that high-level creative skills are in demand and are of significant worth, but that pay cannot be seen as an accurate indicator of value when creative graduates are not using pay as the primary basis on which to make their career choices.

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## Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
	Background and motivation	5
	Structure of the report	6
<b>2</b>	<b>Methodology</b>	<b>7</b>
	Data	7
	Sample	7
	Defining subjects	8
	Defining motivation	10
	Analysis	10
	Caveats and limitations	11
<b>3</b>	<b>Findings</b>	<b>12</b>
	Graduate employment	12
	Employment in the creative industries	16
	Employment in creative occupations	19
	Employment in the creative economy	24
	Graduate motivations	25
	Earnings descriptive statistics	27
	Earnings regressions	30
<b>4</b>	<b>Conclusions</b>	<b>40</b>
	Conclusion	40
	Policy recommendations	41
	Future areas of work	42
<b>5</b>	<b>References</b>	<b>43</b>
<b>6</b>	<b>Endnotes</b>	<b>44</b>
<b>7</b>	<b>Appendices</b>	<b>45</b>
	Appendix A – Sensitivity Analysis	45
	Appendix B – Supplementary Findings Including Full Subject Breakdowns	50
	Appendix C – Econometric Analysis of DLHE	61
	Appendix D – Full Creative Subject Categorisation	68

## 1

# Introduction

## Background and motivation

In recent years, several studies have attempted to quantify the economic value of higher education. These studies have typically focussed on graduate earnings, finding that outcomes differ by subject, and that, almost exclusively, arts-based subjects return the lowest salaries (Belfield et al., 2018; O’Leary and Sloane, 2005; Vries, 2014; Walker and Zhu, 2011). The most recent example, produced by the Institute for Fiscal Studies (IFS), presents the startling finding that men who study a Creative Arts and Design subject at university have, on average, earned less over their lifetime than those who did not go to university at all (Britton et al., 2020). These studies are typically keen to make clear that they are unable to account for the broader economic and non-economic returns of studying a creative subject, and that there is a plethora of alternative factors which influence earnings to a greater extent than subject choice at university. Notwithstanding these limitations, even within narrow economic perspectives, the findings appear to be at odds with the extraordinary growth of the creative industries and the creative economy over the last 10 years (DCMS, 2020) and the repeated identification of skills gaps in the creative workforce (Bakhshi and Spilsbury, 2019; Carey et al., 2019; Creative Skillset, 2016; Giles et al., 2020; Work Foundation, 2019).

However, previous studies’ tendency to examine graduate outcomes in relation to the economy as a whole, mean that we lack specific evidence concerning the outcomes for graduates working in creative roles<sup>1</sup> and interpretations that are sensitive to the nuances of creative sectors and their different patterns of employment and remuneration. By way of explanation, it has been found that almost half of creative workers in the creative industries are freelance or self-employed (Easton and Cauldwell-French, 2017), and that informal working arrangements such as cash-in-hand, voluntary and other unpaid work is common in these sectors (Alacovska, 2018). Moreover, despite being a highly educated sector, with 71 per cent of workers being qualified to at least degree level, average salaries in many creative sub-sectors are still substantially lower than comparably skilled professions (Giles et al., 2020). As such, when considering the economic value of creative higher education, it is important to incorporate both a greater understanding of the relationship between creative education and employment prospects in high-growth creative sectors, and to consider how the nuances of work in these roles may impact graduate earnings and data’s efficacy in capturing them. Sectoral differences mean that it is highly likely that creative graduates are contributing economic value to the country through their labour in high-growth sectors such as the creative industries, while not necessarily earning the same salaries as their non-creative counterparts. Consequently, if creative graduates are more likely to be working in creative roles than other graduate groups, then perhaps overall variations in earnings will be partially explained by the structure and remuneration practices of the creative industries, rather than the result of creative higher education providing a less valued skillset.

Additionally, in problematising the correlation between studying a creative degree and low earnings outcomes, it is important to establish whether creative graduates are earning less because they are unable to be employed in higher paid work, or are 'opting out' of higher paid work, because they are less motivated by economic remuneration or are willing to forego it to pursue a career which they are passionate about. There are long-standing arguments that artists and other creative workers enter into creative work for reasons beyond monetary reward (Menger, 1999). Following this line of reasoning, low earnings outcomes for creative graduates may not simply be the result of over-supply and/or under-demand, or of 'low quality' education, but instead a reflection of the different emphasis placed on earnings by creative graduates in developing their careers. If the reason for low returns to government subsidy of creative higher education lies in the motivations of students, rather than the education provided, then this would not necessarily be remedied by reducing the numbers of students who study these subjects. Although inherently difficult to measure, it is therefore important that we gain an understanding of the motivations that creative and non-creative graduates have for entering various types of work in order to make more informed decisions about the likely repercussions of policy intervention.

This report addresses these issues by assessing the relationships between degree type, employment in the creative industries, motivation for entering work, and earnings outcomes, with a specific focus on creative graduates. The purpose of the report is not to refute the well-established evidence that creative graduates are found to earn, on average, less than non-creative graduates. Rather the purpose is to explore why this might be the case, to paint a more detailed picture of the relationship between creative higher education and employment, and to offer some alternative perspectives on value for money. In doing so, the report provides much needed evidence to support responses to current threats to creative higher education in the UK.

## Structure of the report

The next section of this report outlines the methodology used, including details of the dataset and samples, definitions of key concepts and methods of analysis. The report then presents its findings, indicating where graduates are working six months and three and a half years after they graduate, the types of roles graduates are in, and the motivations of different graduate groups for choosing work. The findings then turn to econometric analysis of earnings for creative and non-creative graduates, both in the creative industries and elsewhere in the economy, when controlling for these motivation factors. Finally, the report concludes with some interpretations of the findings and offers some recommendations for policy makers.

## 2

## Methodology

### Data

This report uses a dataset from the higher education Statistics Agency (HESA), which includes information for all UK and EU students who graduated from a UK higher education institute in the academic year 2012/13. The data includes demographic information and details of the course each student has completed (including subject at 4-digit Joint Academic Coding System (JACS) level). In addition, the dataset includes responses to the Destination of Leavers From higher education survey (DLHE) which is conducted with graduates six months after graduation (2013) and the Destination of Leavers From higher education Longitudinal survey (DLHE Long) conducted roughly three and a half years after graduation (2016/17). The survey responses include information about the industry and occupations that graduates were working in at the time of the survey, recorded using Standard Industrial Classification (SIC) and Standard Occupational Classification (SOC) codes, as well as graduates' self-reported yearly earnings, including those of business owners, freelancers or self-employed workers.<sup>2</sup> The surveys also include questions relating to graduates' motivations for undertaking work. Through analysis of this dataset it is therefore possible to link a graduate's specific degree subject with their earnings, and work in specific occupations and industry sectors, and their motivation for entering their current job six months and three and a half years after graduation.

### Sample

Data used in this report is a subsample of the full HESA dataset that includes all UK/EU graduates who graduated in the year 2012/13 with a 'first degree' (i.e. undergraduate degree) and were aged 24 or under at the time of graduation. As it was important to be able to accurately classify degree subject, all joint honours graduates who studied subjects which spanned multiple subject areas were excluded (see below for subject grouping definitions). Consequently, analysis pertains to the population of 289,000 graduates who completed a first degree in 2012/13, were aged 24 or under, and studied subjects that fall within a single subject classification. From this base population, analysis was conducted on all respondents to the DLHE survey (sample 1) and all respondents to the DLHE Long survey (sample 2). [Table 1](#) shows the sample sizes and the proportion of the base population which they capture.

**Table 1: Sample sizes**

	n	Percentage of base
Base population	289,000	100%
DLHE respondents (6 months)	194,415	67%
DLHE Long respondents (3.5 years)	48,675	17%

Respondents to the DLHE formed the original sampling frame of the DLHE Long, and therefore all graduates in the DLHE Long sample are also in the DLHE sample. To ensure that the DLHE Long sample is representative, it is weighted in accordance with HESA's weighting methodology, which applies a balancing weight to respondents based on a combination of fifteen different profiling variables (see IFF, 2017). In the remainder of this report all figures given for the DLHE Long sample utilise this weighting, with unweighted valid response sizes included underneath each table.

## Defining subjects

This report bases its main categorisation of subject groups on the Common Aggregation Hierarchy grouping structure (CAH) developed by HESA, which is used to apply standard groupings to subjects which have been coded at the more granular JACS level.<sup>3</sup> The report bases its subject categorisation on the highest level CAH groupings (CAH 1) which consists of 26 subject groups. However, it recategorizes certain subjects as 'creative subjects', which it defines with reference to Comunian et al. (2011) as those subjects which map to the creative industries. This definition of creative subject covers all of the 'Design and creative and performing arts' CAH group,<sup>4</sup> as well as all of the 'Media, journalism and communications' CAH group. It also adds a number of other subjects to the creative definition, such as script writing, video games design, television studies, and music recording, which would normally appear under different groupings. Creative subjects have also been further broken down to indicate the specific creative industries sub-sector which they relate to in order to provide more granular analysis.<sup>5</sup> Accordingly, both the higher-level 'All Creative Graduates' and the lower-level creative subject sub-groups – e.g. 'Architecture Graduates' – are used throughout the report. This categorisation enables greater understanding of the relationship between the higher education sector and the creative industries more broadly and allows for analysis on specific sub-groups of creative industries relevant courses.

Classifying creative subjects in this way means that some CAH groups are smaller than they would otherwise be. For example, as architecture subjects have been classified as creative, the CAH group 'Architecture, building and planning' now only contains building and planning subjects. Similarly, as software and computer games subjects have been categorised as creative, these have been removed from the 'Computing' CAH group.<sup>6</sup> As the categorisation of subject is a non-trivial decision, sensitivity tests were conducted to assess outcomes using different definitions, the results of which can be found in Appendix A. A full list of all subjects considered by this report to be 'creative subjects' – i.e. those aligned to the creative industries – can be found in Appendix D.



Table 2 shows the subject groupings used in this report and the proportion of the graduate cohort who completed a degree in that subject.

**Table 2: Breakdown of cohort by subject group**

Subject group	Proportion of graduates
Agriculture	0.7%
Building and planning	1.3%
Biological and sport sciences	6.8%
Business and management	16.5%
Combined and general studies	0.4%
Computing	3.1%
Education and teaching	3.6%
Engineering and technology	6.7%
Geography and environment	2.9%
History, philosophy and religion	4.6%
Language and area studies	5.4%
Law	4.6%
Mathematical sciences	2.2%
Medicine and dentistry	2.6%
Physical sciences	2.6%
Psychology	3.9%
Social sciences	7.8%
Allied to medicine	6.8%
Veterinary sciences	0.2%
Advertising and marketing	0.2%
Architecture	1.2%
Crafts	0.1%
Design	4.3%
Film, TV, radio and photography	3.4%
IT and software	0.8%
Publishing	1.0%
Museums, galleries and libraries	0.004%
Music, performing and visual art	5.3%
Broad creative subject	0.9%
<b>All Creative graduates</b>	<b>17.3%</b>
<b>All Non-creative graduates</b>	<b>82.7%</b>

n=289,000

## Defining motivation

The report uses survey response data to assess graduate motivations for taking their current jobs. The report focuses on two main motivation factors: which we refer to as desirability – choosing to take a job because it was exactly the type of job the graduate wanted/it fitted into their career plans – and necessity – choosing to take a job in order to earn a living/pay off debts. As survey respondents are able to pick multiple reasons for taking a job, it becomes meaningful to differentiate motivation profiles into four distinct groups: those who take a job out of desirability but not necessity, those who take a job out of necessity but not desirability, those who reported both reasons, and those who reported neither reason. These motivation factors do not strictly indicate intrinsic and extrinsic motivation, as viewing a job as exactly the type of job the graduate wants does not discount the possibility that they may want that job because it pays well. However, these motivation factors are effective indicators of whether graduates are entering the type of jobs which they consider desirable, or are entering work which is not ideal for them, but enables them to earn a living.

## Analysis

There are two main types of analysis used in this report. Firstly, descriptive statistics are offered to show the types of activities graduates are engaged in both six months and three and a half years after they graduate. This analysis focuses largely on employment in the creative industries and in creative occupations, which the report classifies in line with DCMS classifications (DCMS, 2016) using the 4-digit SIC and SOC codes provided in the data. Descriptive statistics are also offered on raw earnings data. Secondly, the effect on earnings of studying different subjects are assessed using Ordinary Least Squares (OLS) regression models, which control for a number of background, attainment and employment characteristics. Background characteristics include gender, ethnicity, (dis)ability, parental occupation and age. Attainment characteristics include educational attainment prior to university (operationalised as UCAS tariff points), degree grade and university type (categorised as Russell group, other pre-1992 university, post 1992 university or specialist arts institution). Employment characteristics include whether a graduate was in full-time work, part-time work, or freelance/self-employed/business owner. The dependant variable in these regressions is annual earnings in Pounds Sterling.<sup>7</sup>

## Caveats and limitations

There are a number of health warnings that come with this report. First and foremost, it is worth explicitly stating what might be considered obvious; that graduate earnings outcomes are not the only measure of the value of higher education. Indeed, this report attempts to demonstrate that high levels of employment in high-growth sectors such as the creative industries should also be considered valuable, independent of the earnings implications such employment confers. Moreover, there are numerous non-economic benefits of higher education for both individuals and society that should be taken into account when assessing its value (BIS, 2013).

Beyond this general caveat, there are some further limitations to the analysis that are worth expanding upon. Firstly, this study uses data from a single cohort only (2012/13) and only examines graduate outcomes six months and three and a half years after graduation. It therefore assesses outcomes at a specific point in time and is unable to speak to life-time earnings. Moreover, both the education and work environment for those graduating in 2012/13 will inevitably be different to that of graduates in subsequent and future cohorts. As the 2012/13 cohort was the last to complete the DLHE Long survey before it was replaced by the Graduate Outcomes survey (conducted only 1 year after graduation) it is the most up to date dataset we have on three and a half year outcomes. However, care should be taken in extrapolating the results of this report to the value of creative education for graduates today or in the future. Secondly, while many attainment and background characteristics have been controlled for in analysis, there are many other factors that contribute to an individual's earning potential that are not covered in this report or are unquantifiable. Additionally, despite the report's efforts to paint a detailed picture of the relationship between creative higher education and creative work, limitations in sample size mean that some statistics have not been produced at a subject or sub-sectoral level. As there is wide variation in the structure and working practises of different sub-sectors of the creative industries, care should be taken in interpreting sector-wide results. Moreover, as the report is based on self-response survey data, as always, survey biases could be affecting results. This may be of particular importance when considering the reported earnings of those working self-employed, freelance or running their own business, who may have varying interpretations of what constitutes 'basic pay' as asked in the survey questionnaire.

Finally, throughout this report graduates who have undertaken a degree in a subject aligned to the creative industries are referred to as 'creative graduates' and those who have studied other subjects as 'non-creative graduates'. This categorisation should be viewed as shorthand only, and in no way implies that graduates who have undertaken a degree in a subject which is not aligned to the creative industries are, either inherently or by virtue of their training, not creative in proclivity, ability or practice. Moreover, this is not to suggest that there are not significant elements of creativity inherent to other higher education courses, but merely that other courses do not directly align with a sub-sector of the creative industries.

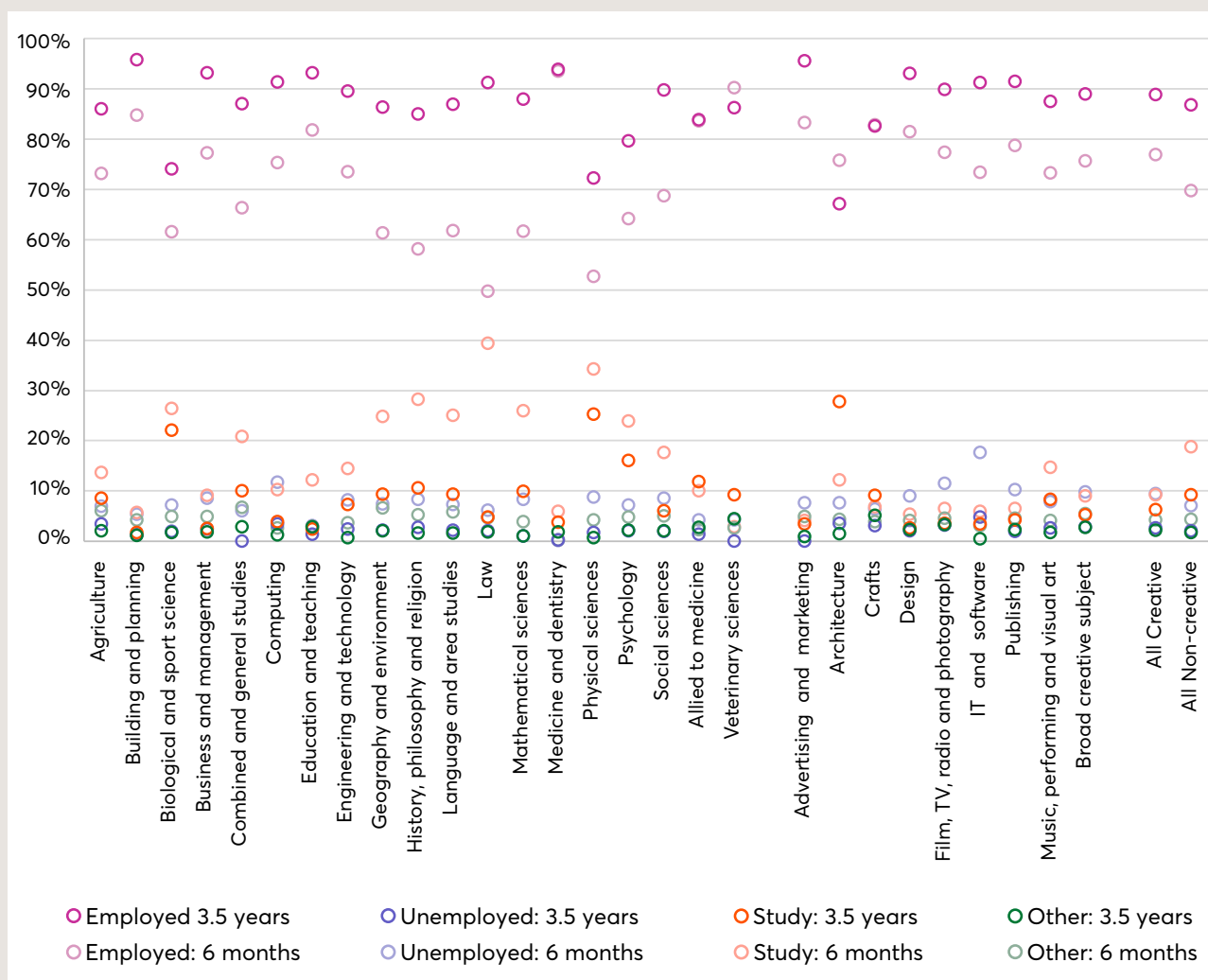
# 3

## Findings

### Graduate employment

We begin by exploring the 'main activity' that graduates were engaged in at the time of the DLHE survey (six months after graduation) and the time of the DLHE Long survey (three and a half years after graduation). [Figure 1](#) shows which activity graduates considered to be their 'main activity' on the date of each survey.<sup>8</sup> We can see that creative graduates are more likely to have indicated their main activity as being in employment (which here and throughout includes working freelance, self-employed or running a business) six months after graduation than non-creative graduates, with 77 per cent of creative graduates being in employment 6 months after graduation compared with 70 per cent of non-creative graduates. This reflects a greater proportion of non-creative graduates going into further study, with 19 per cent of non-creative graduates' main activity at 6 months being further study, compared with 9 per cent of creative graduates. These discrepancies may suggest that creative graduates are more confident that they have gained the skills needed for employment from their experience of creative higher education, whereas non-creative graduates need, or feel they need, further training after their undergraduate degree. As further support for this assertion, we find that three years later, once further study in unspecified subject areas has taken place, there are substantially reduced differences in the proportion of creative and non-creative graduates stating their main activity as being in employment (89 per cent and 87 per cent respectively), and in further study (6 per cent and 9 per cent respectively).

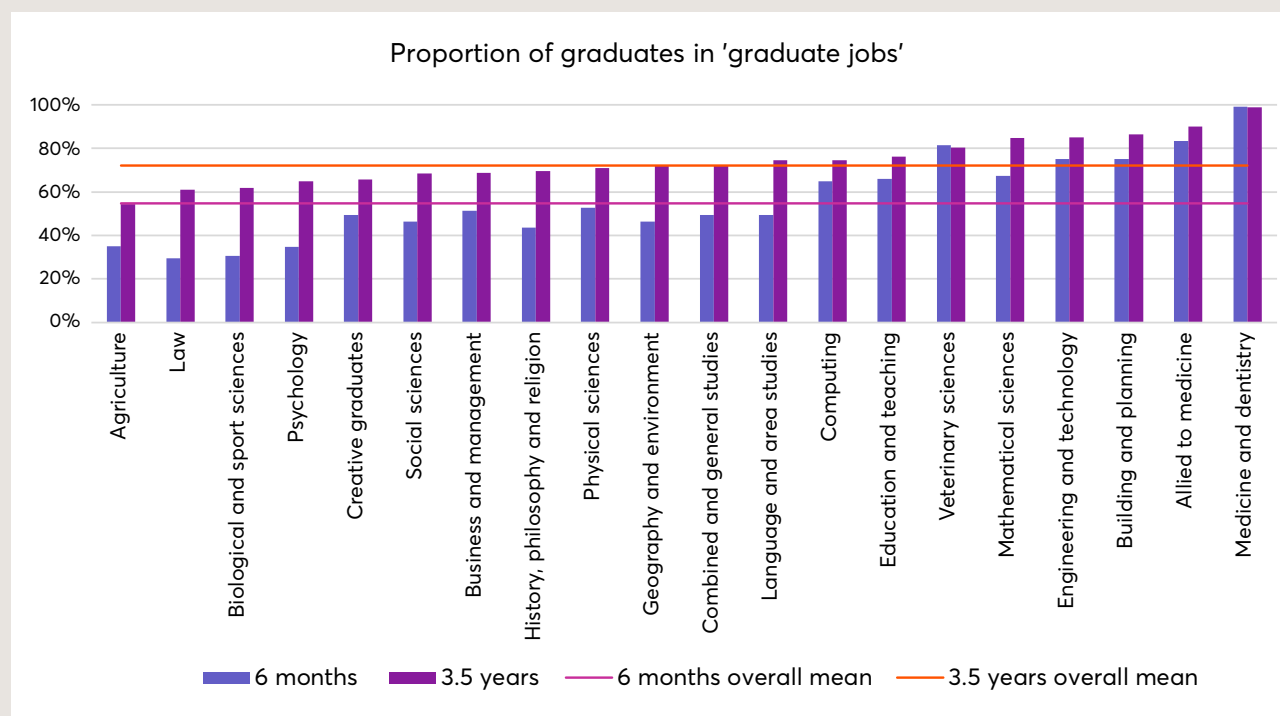
Figure 1: Main activity by subject group at 6 months and 3.5 years after graduation



We also look at the proportion of graduates in 'graduate jobs', which is defined in line with the Office for National Statistics (ONS), based on work by [Elias and Purcell \(2013\)](#).

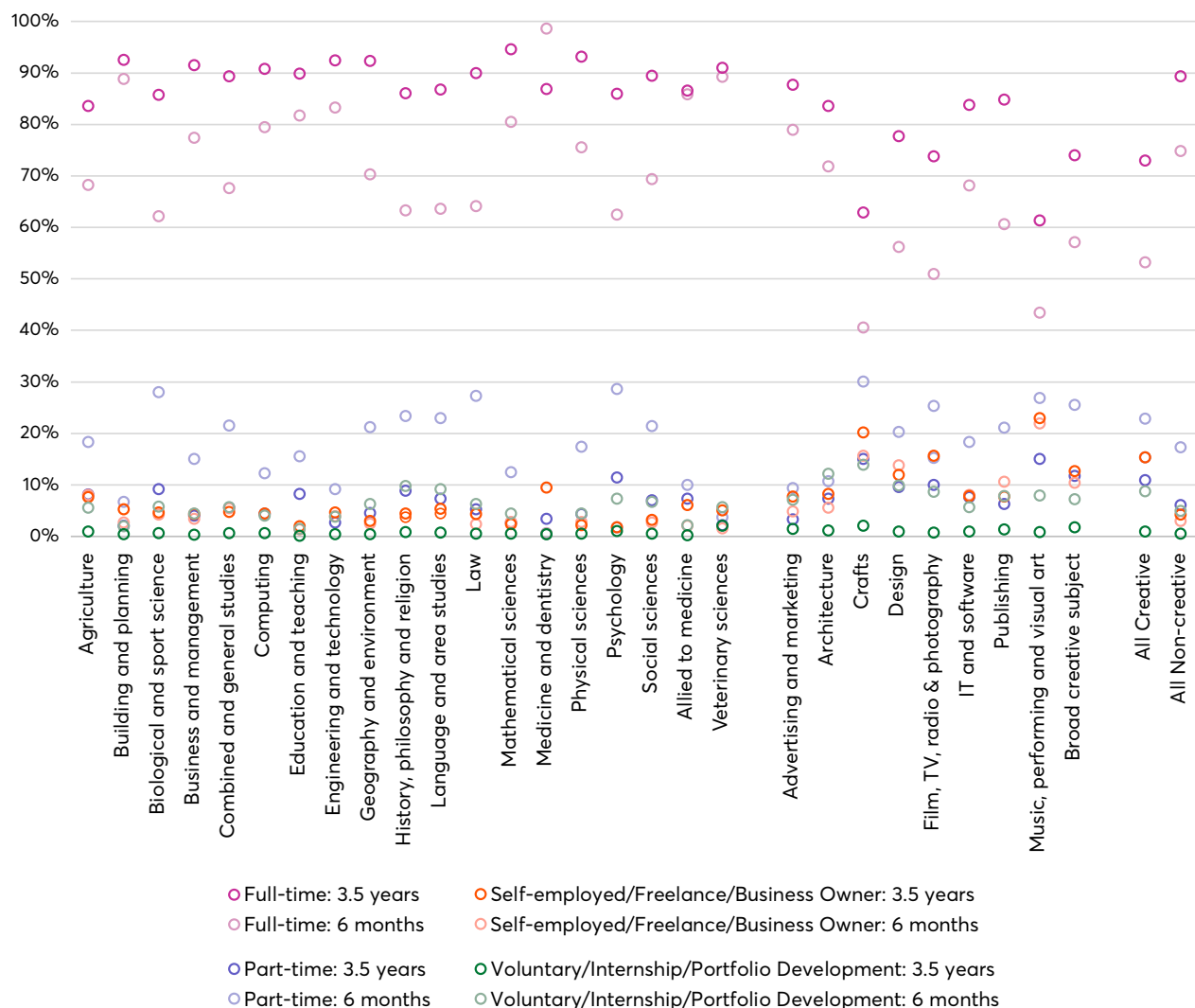
[Figure 2](#) shows that 49.4 per cent of creative graduates are in a graduate level job six months after graduation and 65.7 per cent three and a half years after graduation. This is a higher proportion than in many other subjects at six months, including Geography (46.4 per cent), History (43.7 per cent) and other Social Sciences subjects (46.5 per cent) and many subjects at three and a half years including Law (61.1 per cent), Biology (61.8 per cent) and Psychology (64.8 per cent). This provides evidence that creative graduates are gaining employment in roles which require high levels of training, and that they are able to do so from early on in their careers.

Figure 2: Proportion of graduates in 'graduate jobs'



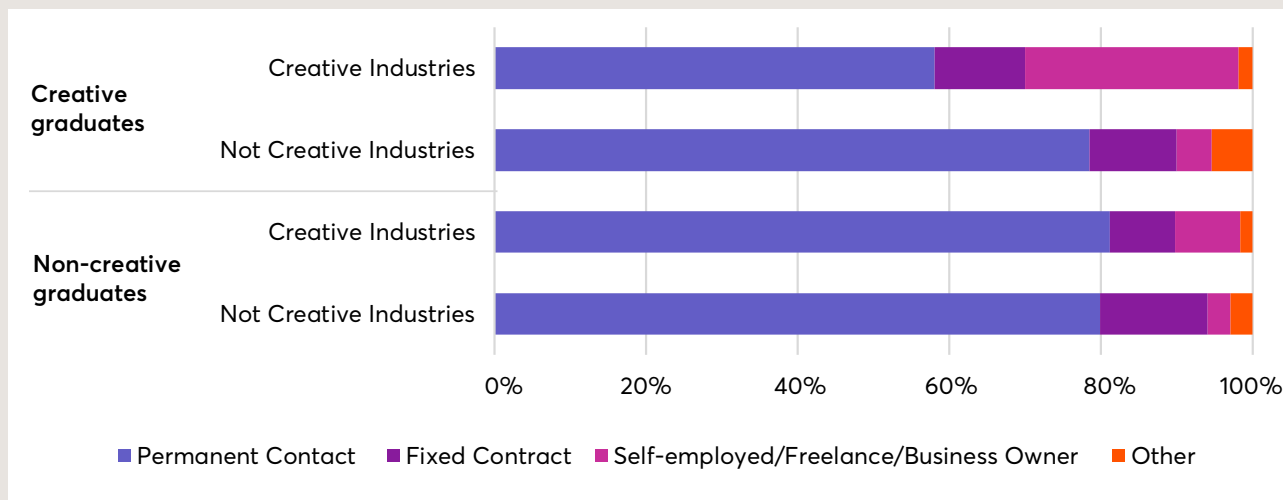
Next we look at the types of employment graduates are in both six months and three and a half years after graduation (Figure 3). Here we see that though a higher proportion of creative graduates are employed than non-creative graduates, the composition of employment is very different. A far smaller proportion of employed creative graduates are in full-time employment compared with non-creative graduates; 53 per cent compared with 75 per cent at six months, and 73 per cent compared with 89 per cent at three years. Reflecting this pattern, a higher proportion of employed creative graduates are found to be in part-time work (23 per cent at six months and 11 per cent at three years) than non-creative graduates (17 per cent and 6 per cent respectively). This is in keeping with much that we know about the nature of the creative economy, where creative workers are likely to hold multiple part-time positions. What is perhaps more interesting however, is that a substantially higher proportion of employed creative graduates are working for themselves. 15 per cent of creative graduates are working as freelancers, self-employed or running their own businesses both six months and three years after graduation, compared with only 3 per cent and 4 per cent of non-creative graduates at the respective dates. We also see the proliferation of low paid and voluntary work in the creative industries reflected in these figures, with 9 per cent of creative graduates either working voluntarily, working as interns or developing a portfolio six months after graduation compared with just 5 per cent of non-creative graduates. Whilst these figures drop to 1 per cent and 0.5 per cent three years later, these findings suggest that many creative graduates need, or feel they need, to build experience through internships, voluntary work or self-guided professional development in order to secure employment in their chosen field. These findings also indicate why creative graduates might be earning less over the course of their career, if they are more likely to be in part-time, low paid, or voluntary employment when they first enter the job market.

**Figure 3: Employment type by subject group at 6 months and 3.5 years after graduation**



The high proportion of creative graduates working for themselves is highlighted when we begin to factor in where graduates are working. [Figure 4](#) shows the distribution of contract types, including both full-time and part-time workers, for creative and non-creative graduates who work inside and outside the creative industries three and a half years after graduation. We find that three and a half years after graduation 28.1 per cent of creative graduates who are working in the creative industries are working as freelancers, self-employed or running their own business. This compares with only 4.6 per cent of creative graduates working outside the creative industries and 8.5 per cent of non-creative graduates working in the creative industries. This substantial disparity demonstrates a clear link between creative education and freelance work in the creative industries, which may be contributing to the comparatively low earnings for creative graduates.

Figure 4: Contract type by graduate group and creative industries employment



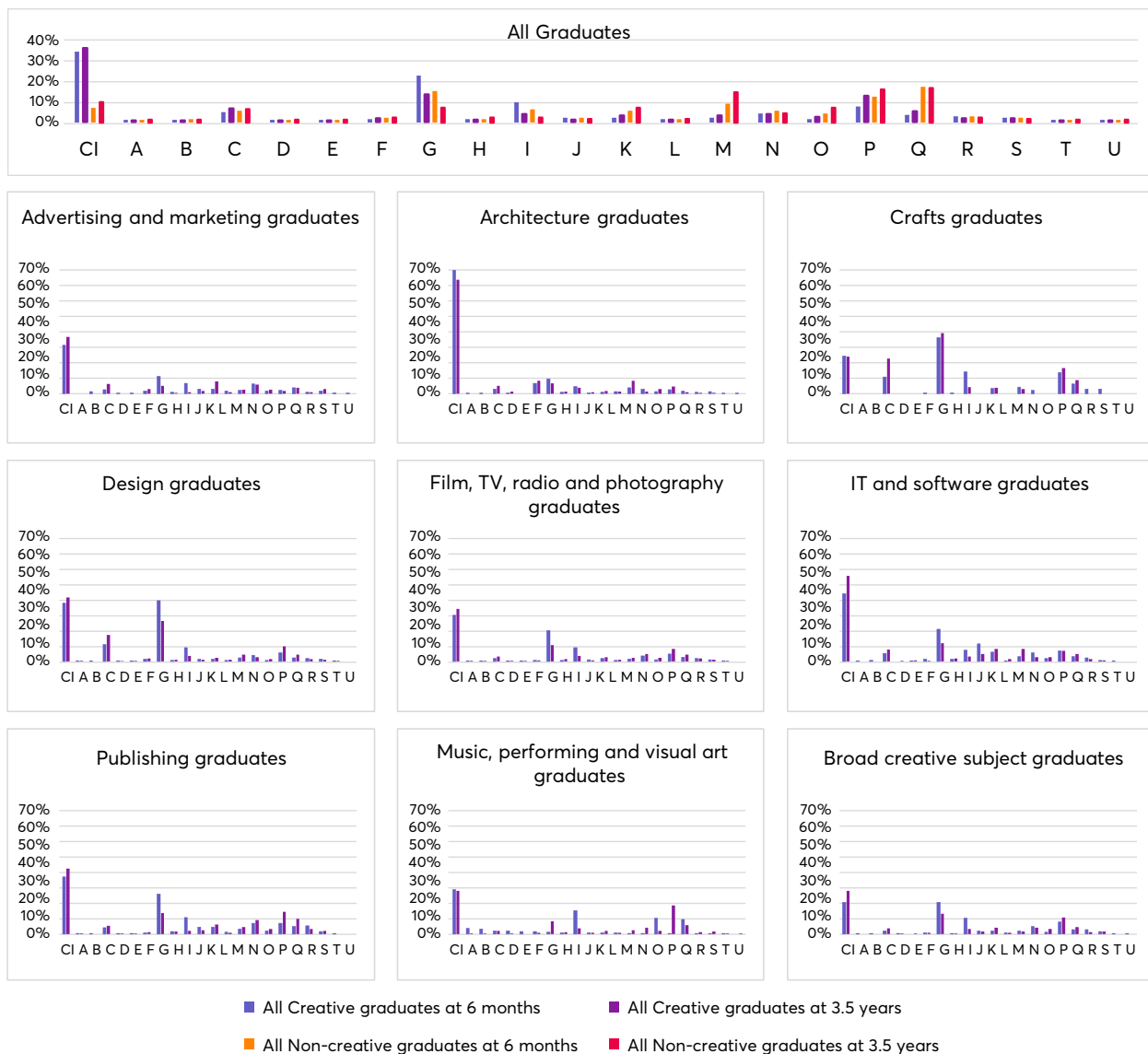
## Employment in the creative industries

We now turn specifically to employment prospects for graduates in the creative industries. Figure 5 shows the proportion of employed creative graduates working in various sectors of the economy. Here we find a far higher proportion of creative graduates working in the creative industries than in other sectors, with 35 per cent of creative graduates being employed in the creative industries six months after graduation, rising to 37 per cent three years later. In contrast, only 7 per cent of non-creative graduates are working in the creative industries six months after graduation and only 9 per cent after three and a half years. Moreover, we find that the largest proportion of employment across all creative subject sub-groups, with the sole exception of crafts graduates,<sup>9</sup> is in creative industry sectors. While it is difficult to simply match other graduate groups to particular sectors of the economy in the same way as this report has done for creative graduates and the creative industries, as an indication of the high levels of match between creative graduates and work in the creative industries, we can make broad comparisons to some other specialist and applied subject groups. For example, we find that only 18.5 per cent of engineering graduates are working in industry sectors classified as 'engineering activities', while 44.7 per cent of law graduates are working in industry sectors classified as 'legal activities' three and a half years after graduation.<sup>10</sup>

When we look to Figure 6 we see the breakdown of creative graduates across each sub-sector of the creative industries. Here we get the first real indication of the fit between specific creative subjects and specific areas of the creative industries, with high proportions of graduates working in the sub-sector to which their degree subject is aligned. We also see interesting interactions between subjects and sectors, with many architecture and crafts graduates going into design and many publishing graduates going into film. Overall, the highest proportion of creative graduates work in the music, performing and visual arts sub-sector, followed by film and design.

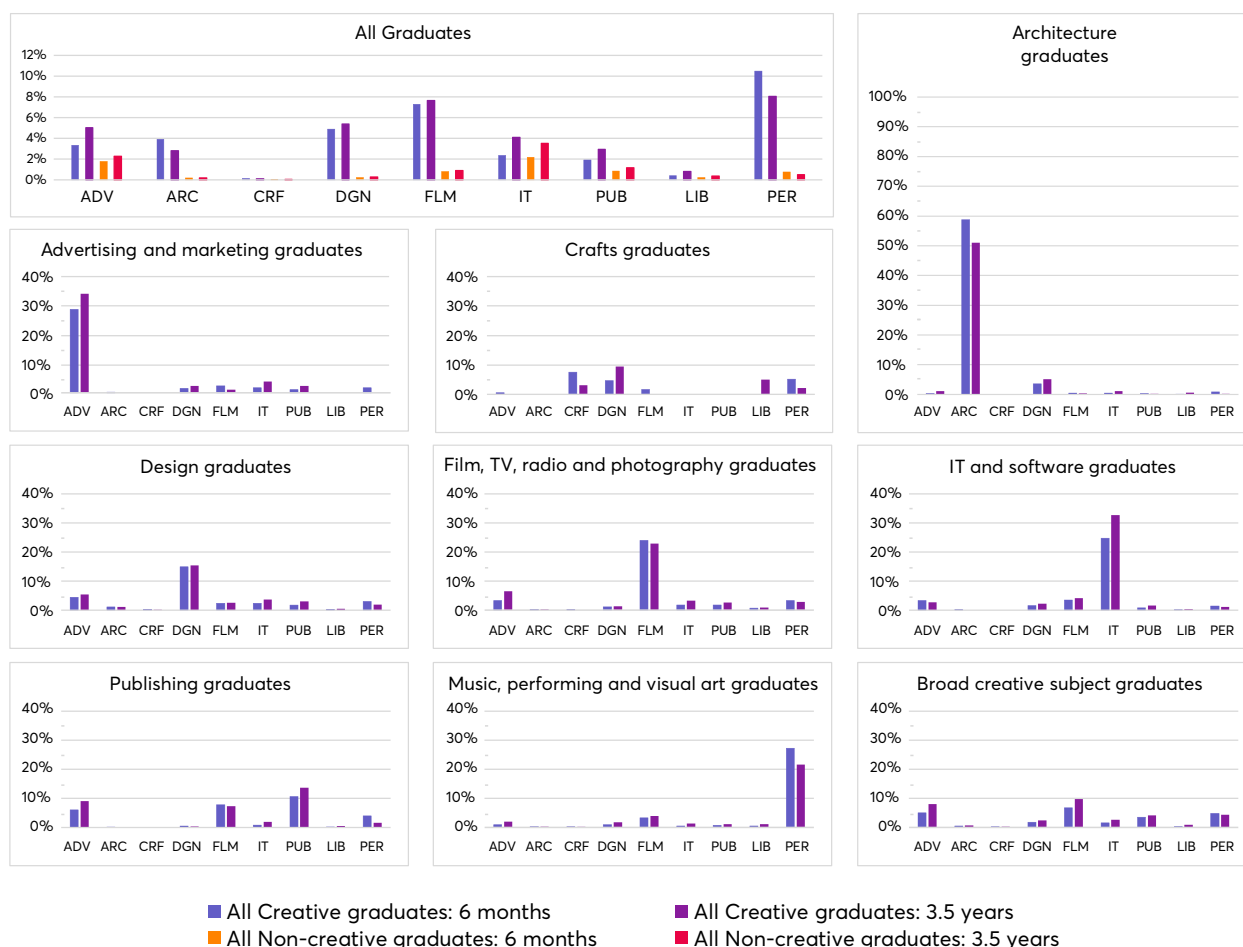


Figure 5: Proportion of creative graduates working within main industry sectors



CI = Creative Industries	K = Financial and Insurance Activities
A = Agriculture, Forestry and Fishing	L = Real Estate Activities
B = Mining and Quarrying	M = Professional, Scientific and Technical Activities
C = Manufacturing	N = Administrative and Support Service Activities
D = Electricity, Gas, Steam and Air Conditioning Supply	O = Public Administration and Defence; Compulsory Social Security
E = Water Supply, Sewerage, Waste Management and Remediation	P = Education
F = Construction	Q = Human Health and Social Work Activities
G = Wholesale and Retail Trade, Repair of Motor Vehicles	R = Arts, Entertainment and Recreation
H = Transportation and Storage	S = Other Service Activities
I = Accommodation and Food Service Activities	T = Activities of Households as Employers; Undifferentiated Goods
J = Information and Communication	U = Activities of Extraterritorial Organisations and Bodies

**Figure 6: Proportion of creative graduates working within creative industries sub-sectors**



ADV = Advertising and marketing

ARC = Architecture

CRF = Crafts

DGN = Design: product, graphic and fashion design

FLM = Film, TV, video, radio and photography

IT = IT, software and computer services

PUB = Publishing

LIB = Museums, galleries and libraries

PER = Music, performing and visual arts

Hitherto, the analysis has shown the proportion of creative and non-creative graduates working in various sectors of the economy. However, to understand the extent to which the creative industries rely on graduates with creative degrees, it is important also to look at the proportion of graduates working in the creative industries who have a creative degree. Table 3 shows that creative graduates make up 54 per cent of all those working in the creative industries in our DLHE sample, and 46 per cent in our DLHE Long sample.<sup>11</sup> This means that just over half of the 2012/13 cohort of graduates who worked in the creative

industries six months after graduation had a creative degree, and just under half of those at three and a half years had a creative degree. If we remember that creative graduates make up just 17 per cent of the cohort, then making up around half of graduate labour in the creative industries demonstrates a substantial over-representation. Moreover, when we look across the creative industries, we see even higher representation of creative graduates in certain sub-sectors. For example, creative graduates make up 82 per cent of all graduates employed in the design sector, 78 per cent of graduates in the music, performing and visual arts sector, and 75 per cent of graduates in the architecture sector three and a half years after graduation. Again, we also see strong correlation between degree type and sub-sector, with the highest proportion of creative graduates working in sectors which fit their degree. This further demonstrates that industry sub-sectors are heavily employing graduates with qualifications that specifically link to their area of economic activity, and the success of creative higher education in equipping graduates with relevant skills.

## Employment in creative occupations

In addition to the importance of the creative industries to creative graduates, we know that there are many creative jobs outside the creative industries which may also be highly suitable for creative graduates. Consequently, the next part of analysis focusses on graduate occupations. [Table 4](#) lists the top 5 jobs for each creative subject sub-group (i.e. the occupations, based on 4 digit SOC classifications and the DCMS classification of creative occupations, in which the highest proportion of creative graduates and/or sub-groups are employed). The bars within the figures in the table show the total proportion of graduates working in that role and, stacked within them, the proportion of graduates who reported that their motivation for taking the job was based upon its desirability.

This shows that the top jobs for creative graduates highly correlate with the degree they have taken, with the top job for almost all creative subject groups being in the creative sub-sector to which that subject is aligned. The table also illustrates the changing nature of work between the two survey periods, with many creative graduates going into other areas of creative work as their careers develop. This change in career plans is particularly marked when contrasted against non-creative graduates. [Table 11](#) in [Appendix B](#) shows the top 5 jobs of all graduate groups, and we can see a clear pattern that many non-creative graduates from subject areas as wide ranging as languages, history, maths and physical sciences, who may have begun their careers working in industry, move into work in the education sector three and a half years after graduation.

Moreover, when we look to the motivations for taking certain jobs, we find that most creative graduates who take up creative occupations do so because it was exactly the type of job they wanted or it fitted into their career plans, and that a far smaller proportion take up non-creative roles because of these desirability factors. This is very important because it is an indication of the success of creative graduates in gaining roles which they desire, and feel are most suitable for them.

Table 3: Creative industries graduate workforce breakdown by creative subject sub-group

	All Creative Industries		Advertising and marketing		Architecture		Crafts		Design: product, graphic and fashion design		Film, TV, video, radio and photography		IT, software and computer services		Museums, galleries and libraries		Music, performing and visual arts		Publishing	
	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years
Advertising and marketing graduates	1%	1%	4%	3%	0%	0%	0%	.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Architecture graduates	6%	3%	0%	0%	75%	62%	0%	.	4%	4%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%
Crafts graduates	0%	0%	0%	0%	0%	0%	22%	.	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Design graduates	13%	11%	11%	9%	6%	8%	32%	.	67%	61%	6%	6%	5%	5%	6%	5%	6%	5%	9%	9%
Film, TV, radio and photography graduates	11%	10%	6%	8%	1%	2%	3%	.	3%	4%	43%	38%	3%	3%	8%	7%	5%	6%	7%	6%
IT and software graduates	2%	3%	1%	1%	0%	0%	0%	.	1%	2%	1%	2%	10%	8%	1%	1%	0%	1%	1%	1%
Museums, galleries and libraries graduates	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Music, performing and visual art graduates	17%	13%	3%	4%	1%	3%	10%	.	5%	8%	9%	10%	1%	2%	12%	14%	62%	64%	4%	4%
Publishing graduates	3%	3%	3%	4%	0%	0%	0%	.	0%	0%	4%	4%	0%	1%	1%	1%	2%	1%	12%	12%
Broad creative subject graduates	2%	2%	2%	3%	1%	1%	3%	.	2%	2%	3%	4%	1%	1%	1%	2%	2%	2%	3%	3%
<b>All Creative graduates (subtotal)</b>	<b>54%</b>	<b>46%</b>	<b>31%</b>	<b>32%</b>	<b>84%</b>	<b>75%</b>	<b>70%</b>	<b>.</b>	<b>83%</b>	<b>82%</b>	<b>68%</b>	<b>65%</b>	<b>21%</b>	<b>20%</b>	<b>29%</b>	<b>32%</b>	<b>77%</b>	<b>78%</b>	<b>35%</b>	<b>35%</b>
<b>All Non-creative graduates</b>	<b>46%</b>	<b>54%</b>	<b>69%</b>	<b>68%</b>	<b>16%</b>	<b>25%</b>	<b>30%</b>	<b>.</b>	<b>17%</b>	<b>18%</b>	<b>32%</b>	<b>35%</b>	<b>79%</b>	<b>80%</b>	<b>71%</b>	<b>68%</b>	<b>23%</b>	<b>22%</b>	<b>65%</b>	<b>65%</b>

DLHE n=17915 | DLHE Long base n= 6035 | DLHE Long weighted n=6074

Note: Some subjects and industries have been suppressed due to low cell counts

Table 4: Top 5 most common occupations for creative graduates sub-groups at 6 months and 3.5 years

Graduate group	6 months		3.5 years	
All Non-creative	Sales and retail assistants Advertising and marketing occupations Medical practitioners Primary and nursery education teaching Nurses		Primary and nursery education teaching Advertising and marketing occupations Sales accounts and business development managers Secondary education teaching professionals IT, software and computer services occupations	
Advertising and marketing	Advertising and marketing occupations Sales and retail assistants Other administrative n.e.c. Business sales executives Waiters and waitresses		Advertising and marketing occupations Sales accounts and business development managers Conference and exhibition managers and organisers Publishing occupations Financial accounts managers	
Architecture	Architecture occupations Design: product, graphic and fashion design occupations Sales and retail assistants Draughtspersons Bar staff		Architecture occupations Design: product, graphic and fashion design occupations Draughtspersons Sales and retail assistants Business and financial project management professionals	
Crafts	Design: product, graphic and fashion design occupations Sales and retail assistants Waiters and waitresses Customer service n.e.c. Receptionists		Sales and retail assistants Design: product, graphic and fashion design occupations Advertising and marketing occupations Crafts occupations Music, performing and visual arts occupations	

Table 4: Top 5 most common occupations for creative graduates sub-groups at 6 months and 3.5 years (continued)

Graduate group	6 months		3.5 years	
Design	Design: product, graphic and fashion design occupations Sales and retail assistants Advertising and marketing occupations IT, software and computer services occupations Music, performing and visual arts occupations		Design: product, graphic and fashion design occupations Advertising and marketing occupations IT, software and computer services occupations Sales and retail assistants Sales accounts and business development managers	
Film, TV, radio and photography	Film, TV, video, radio and photography occupations Sales and retail assistants Advertising and marketing occupations Bar staff Music, performing and visual arts occupations		Film, TV, video, radio and photography occ. Advertising and marketing occupations Other administrative n.e.c. Sales accounts and business development managers Music, performing and visual arts occupations	
IT and software	IT, software and computer services occupations Sales and retail assistants Design: product, graphic and fashion design occupations IT operations technicians IT and telecommunications professionals n.e.c.		IT, software and computer services occupations IT and telecommunications professionals n.e.c. IT user support technicians Film, TV, video, radio and photography occupations Music, performing and visual arts occupations	
Publishing	Publishing occupations Advertising and marketing occupations Sales and retail assistants Film, TV, video, radio and photography occupations Bar staff		Advertising and marketing occupations Publishing occupations Film, TV, video, radio and photography occupations Sales and retail assistants Sales accounts and business development managers	

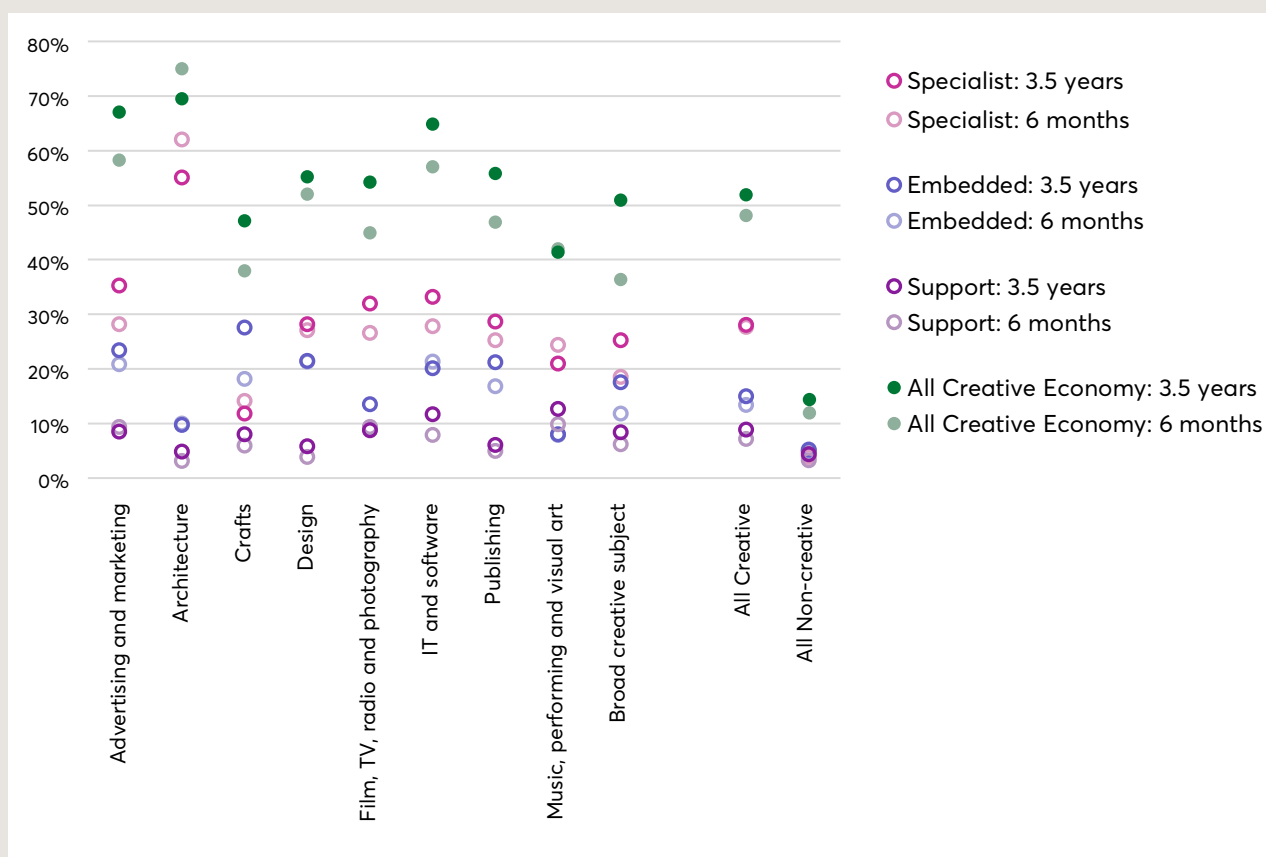
Table 4: Top 5 most common occupations for creative graduates sub-groups at 6 months and 3.5 years (continued)

Graduate group	6 months		3.5 years	
Music, performing and visual art	Music, performing and visual arts occupations Sales and retail assistants Film, TV, video, radio and photography occupations Teaching and other educational professionals n.e.c. Bar staff		Music, performing and visual arts occupations Film, TV, video, radio and photography occupations Teaching and other educational professionals n.e.c. Primary and nursery education teaching Secondary education teaching professionals	
Broad creative subject	Sales and retail assistants Advertising and marketing occupations Film, TV, video, radio and photography occupations Publishing occupations Design: product, graphic and fashion design occupations		Advertising and marketing occupations Film, TV, video, radio and photography occupations Publishing occupations Other administrative n.e.c. Sales and retail assistants	
All Creative	Sales and retail assistants Design: product, graphic and fashion design occupations Music, performing and visual arts occupations Film, TV, video, radio and photography occupations Advertising and marketing occupations		Design: product, graphic and fashion design occupations Advertising and marketing occupations Film, TV, video, radio and photography occupations Music, performing and visual arts occupations IT, software and computer services occupations	

## Employment in the creative economy

So far, we have seen that a high proportion of creative graduates work in the creative industries and that a high proportion of creative graduates work in creative roles. We now turn to the intersection of industry and occupation by considering jobs in the whole creative economy. Following the 'creative trident' approach (Higgs et al., 2008) to the creative economy, the report classifies those working in creative occupations within the creative industries as 'specialist' workers, those working in creative occupations outside the creative industries as 'embedded' workers, and those working in the creative industries in non-creative occupations as 'support' workers. These three groups make up the creative economy. Figure 7 shows that 48 per cent of creative graduates are working in the creative economy six months after graduation, rising to 52 per cent at three and a half years. This means that over half of all creative graduates are going into work either in a creative occupation or in any occupation in the creative industries. This compares with just 12 per cent of non-creative graduates at six months and 14 per cent at three and a half years.

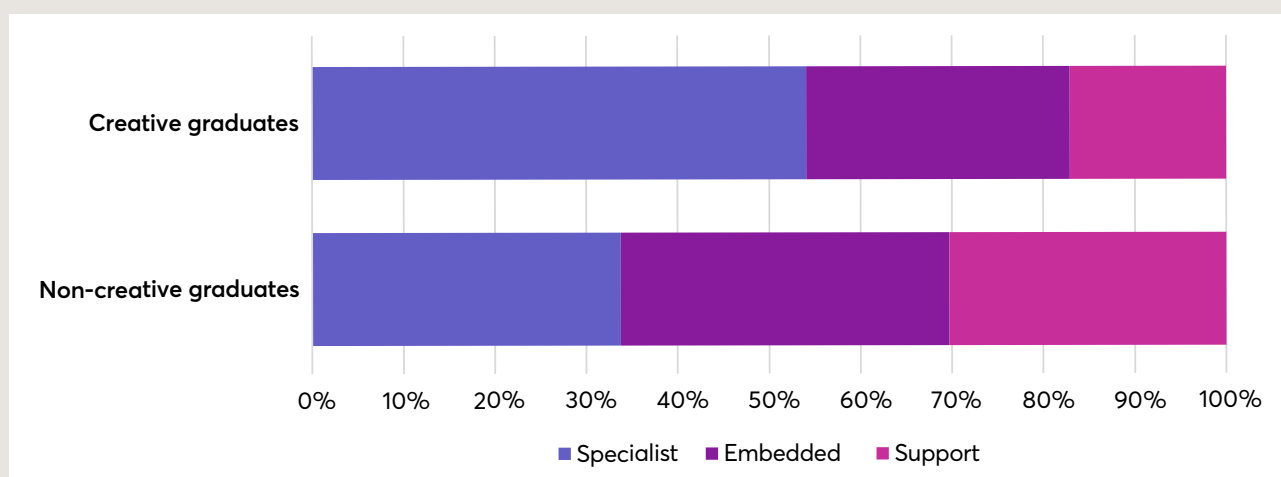
Figure 7: Role in the creative economy by creative graduates sub-group





When we look at only those who work in the creative economy, we see that creative and non-creative graduates tend to perform different roles. Figure 8 depicts all those working in the creative economy at three and a half years after graduation and which roles creative and non-creative graduates are performing. It shows that of those working in the creative economy, over half of creative graduates (51.1 per cent) work as specialists – i.e. work in creative occupations within the creative industries. We find that only 17.1 per cent of creative graduates work in support roles – i.e. non-creative roles in the creative industries. This demonstrates the importance of high-level creative skills to the core of the creative economy, and further suggests that creative graduates are putting their skills to use in creative jobs. For non-creative graduates, there is a fairly even split between each role, with 33.8 per cent working as creative specialists, 36.0 per cent working in embedded roles and 30.3 per cent working in support roles.

**Figure 8: Breakdown of creative economy employment by role**

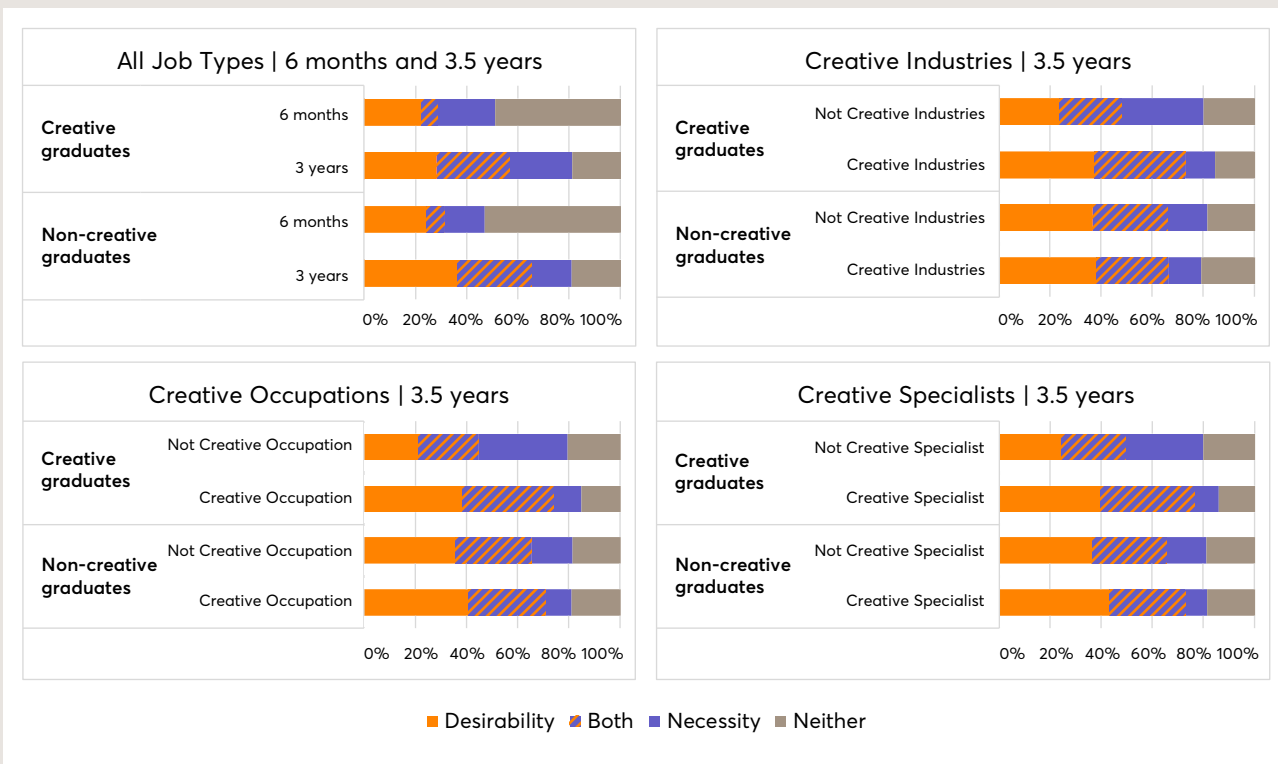


## Graduate motivations

Next, we examine the motivations profiles of creative and non-creative graduates in greater detail. Figure 9 shows the proportion of graduates who took up employment in their current job for reasons of desirability, necessity, both or neither. As should be expected in a functional jobs market, we see that the proportion of graduates taking jobs out of desirability, rather than necessity, increases over time. More salient findings emerge, however, when we look to the difference in motivation between those working inside and outside the creative industries. For non-creative graduates, the motivations for taking jobs inside the creative industries are roughly similar to their motivations for taking jobs outside the creative industries. This indicates that many non-creative graduates are viewing work in the creative industries as desirable for them, despite not taking a creative degree at university. However, when we look at creative graduates, we find far greater disparity in motivation between those working inside and outside the creative industries. 73 per cent of

creative graduates are taking roles in the creative industries because of their desirability, while only 48 per cent of creative graduates are taking roles outside the creative industries for these reasons. Conversely, a far higher proportion of creative graduates are taking jobs outside of the creative industries solely out of economic necessity (32 per cent) when compared to those working in the creative industries (12 per cent). Whilst it may be unsurprising that creative graduates see work in the creative industries as more desirable for them, what this also suggests is that creative graduates are overwhelmingly conceiving opportunities outside the creative industries as satisfying economic necessity rather than offering career development and progression, compared with non-creative graduates who are viewing work inside and outside the creative industries as equally beneficial for their careers. These discrepancies in the motivation profiles of creative and non-creative graduates show similar patterns regarding creative occupations and creative specialists.

**Figure 9: Motivations for taking job for creative and non-creative graduates**

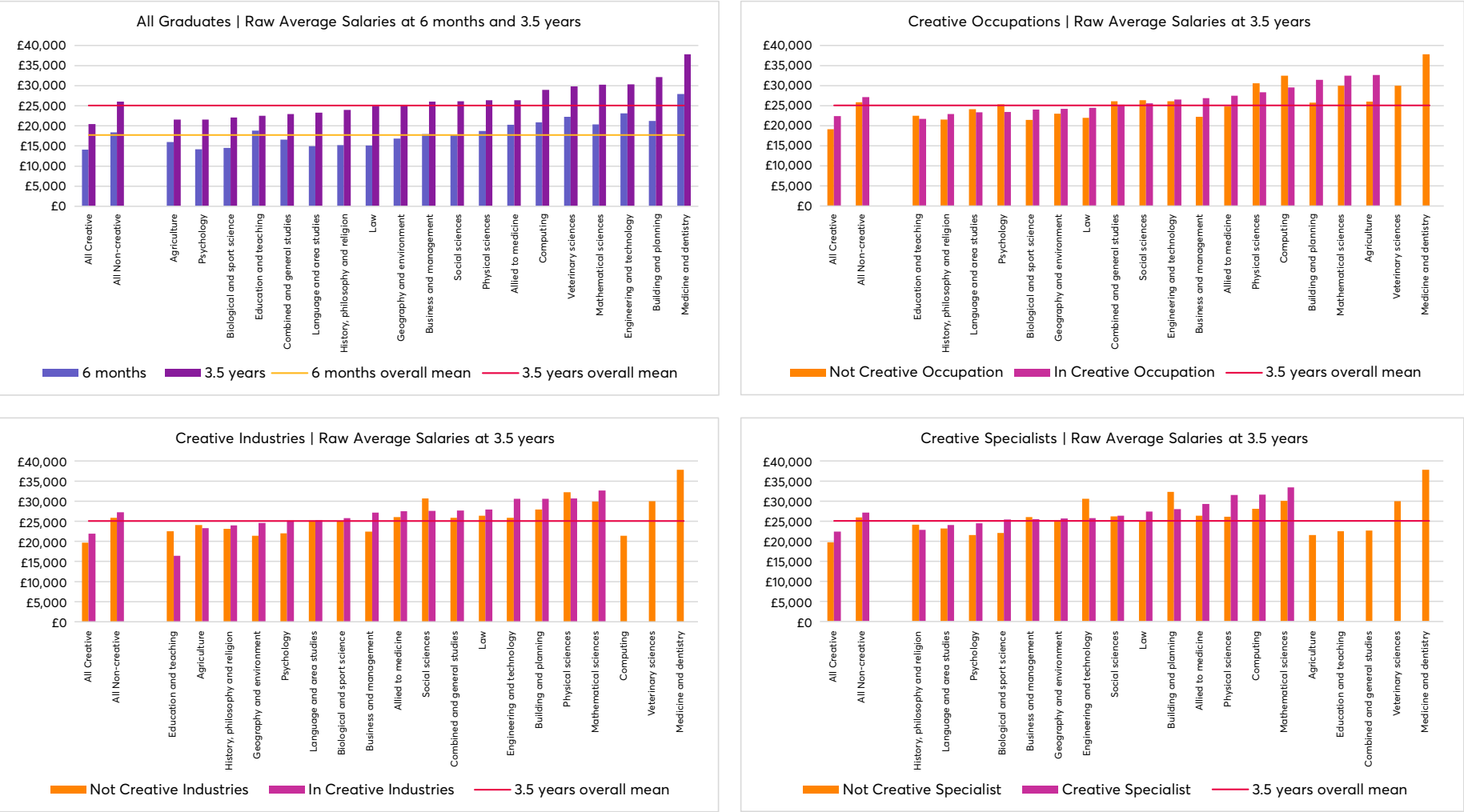


## Earnings descriptive statistics

We now turn to data on graduate earnings. [Figure 10](#) shows the average annual earnings for all graduates. It is important to understand that these figures include all graduates in employment, regardless of whether they are full-time, part-time, self-employed, freelance, or a business owner. The data also relates only to the job that the graduate considers their 'main job' and does not include earnings they may be receiving from second or third jobs. As these factors often correlate with creative work, we might expect raw earnings averages to be disproportionately low for this group.

We can see from these figures that, unsurprisingly, graduate earnings generally increase over time. We also find that, when looking at the raw earnings data, creative graduates are earning approximately £5,550 a year less than non-creative graduates three and a half years after graduation. This is roughly in line with what other studies have shown. However, when we look specifically at creative graduates working in the creative industries, we find that they earn more, on average, than creative graduates not working in the creative industries (approximately £21,950 compared to approximately £19,650). Similar patterns are found for those working in creative occupations (approximately £22,400 compared to £19,100 for those in non-creative occupations) and for those working as creative specialists (approximately £22,400 compared to £19,750 for non-creative specialists). However, interestingly, this is not only the case for creative graduates. For all non-creative graduates as a whole, and for a majority of individual non-creative subjects, graduate earnings are higher on average inside the creative industries than outside them, and higher within creative occupations than not within creative occupations.

Figure 10: Raw average earnings by subject group



We also see large variation in earnings across the creative subject groups. [Figure 11](#) shows the raw average annual earnings for each creative subject sub-group at three and a half years after graduation. It shows that raw average earnings range from approximately £16,000 a year for crafts graduates to approximately £25,000 a year for IT and software or Advertising and marketing graduates. This shows that some creative graduate groups are earning more, on average, than some non-creative graduate groups three and a half years after graduation, for example biology, education and law graduates all earn less, based on raw averages, than IT and software or Advertising and marketing graduates.

What is particularly interesting however, is when we assess the raw earnings data in combination with the proportions of graduates who are working freelance, self-employed or running their own business (also depicted in [Figure 11](#)). Of the creative graduate groups, crafts graduates, the lowest earners, are also those most likely to be working for themselves (20 per cent) and Advertising and marketing graduates, the joint highest earners, are also those least likely to be working for themselves (5 per cent). Within the creative graduate groups, this appears to be a fairly consistent trend, with average earnings moving up as the proportion of graduates who work for themselves moves down. In comparison, while the raw average earnings for all non-creative graduates is approximately £26,000 a year, only 3.5 per cent of these graduates work as freelancers, self-employed or running their own business, and we see little evidence of a trend between working for yourself and average earnings for the non-creative graduate groups (see in [Appendix B](#)).

The evidence of a clear relationship within creative subjects between higher proportions of entrepreneurial activity and lower earnings, is of great importance when trying to interpret the seemingly lower graduate returns of creative higher education. As has been discussed earlier, it is highly plausible that the total remuneration packages of the self-employed, freelancers and business owners are less likely to be captured using basic pay earnings metrics than will be true for other groups of workers. When we then see strong negative correlation between a subject's earnings figures and the proportion of its graduates in this type of work, we have to begin to question the efficacy of earnings metrics in providing fair comparison between subject groups. Consequently, these findings suggest that the earnings of graduate groups most likely to be working for themselves, may be being systematically undercounted as much of their income is difficult to capture in official statistics and even self-response data such as that which is used in this report is limited in its ability to capture all income from all sources (see Conlon et al., 2018 for discussion of this and similar issues in relation to the Longitudinal Educational Outcomes (LEO) data).

**Figure 11: Raw average earnings by creative sub-group and proportion of graduates working self-employed, freelance or running their own business at 3.5 years after graduation**



## Earnings regressions

The final part of the analysis uses simple OLS regressions to examine the effect of studying a creative subject on graduate earnings, when controlling for a number of demographic, attainment and work-related characteristics, as well as investigating the effect of motivation factors. This section focuses exclusively on the three and a half year DLHE Long sample, with equivalent regressions for the six-month DLHE sample given in Appendix C. We begin by looking at the effect of motivation on earnings outcomes.

Table 5, shows the impact on earnings when controlling for whether a graduate had taken a creative subject or not, and their motivation factors. Model 1 shows earnings outcomes when we only control for demographic, attainment and work-related characteristics. Model 2 shows the effect of adding creative/non-creative subject (but not motivation) to the model. Model 3 shows the effect of adding motivation (but not creative/non-creative subject) to the model, and model 4 shows the effect of adding both creative/non-creative subject and motivation to the model. The dependent variable is yearly earnings in pounds. Interestingly, when we look at the adjusted  $R^2$  values (a measure of the model's overall

goodness of fit), we find that motivation factors explain more of the variation in graduate earnings than whether graduates took a creative degree or not. Demographic, attainment and work-related characteristics explain around 25.7 per cent of the variation in earnings and when we add motivation factors to our model, this increases to 28.1 per cent. In contrast, adding the creative/non-creative subject distinction to our model only increases its explanatory power to 26.7 per cent. This suggests that motivation has more of an impact on earnings than whether a student took a creative or a non-creative subject at university.<sup>12</sup> The strong explanatory power of motivation as a variable further evidences that subject choice at higher education accounts for only a small fraction of the variation in future earnings and that there are many other factors – even beyond those captured in this report – which have a more substantial effect.

The regressions in [Table 5](#) also show that when controlling for demographic, attainment and work-related characteristics, the negative effect of taking a creative degree, as opposed to a non-creative degree is approximately £3,000 a year. However, when we control for motivation, this decreases to approximately £2,700 a year. The interpretation of this finding is not straightforward. In particular, it should not be taken as a simple argument that creative graduates accept lower earnings in exchange for intrinsic motivation: in fact, we find that across subject choice desirability motivation factors positively affect income by approximately £2,224, whereas necessity motivation factors negatively affect income by approximately £2,239. Therefore, the finding that controlling for motivation results in a smaller gap between creative and non-creative graduates, suggests that part of the reason creative graduates' earnings are low overall, may be because, as shown in the motivation section, when working in roles outside of the creative industries, creative graduates are more likely to have taken that role purely out of economic necessity – a motivation profile which correlates with lower earnings. This would mean that it is the disparity in motivation profiles for those working outside the creative industries, rather than inside the creative industries, which has the dominant effect on earnings.

**Table 5: Comparing the effect of motivation and creative/non-creative subject on earnings**

	(1)	(2)	(3)	(4)
<b>Gender (ref. Female)</b>				
Male	3077*** (113)	3089*** (112.2)	3149*** (111.2)	3156*** (110.6)
<b>Ethnicity (ref. White)</b>				
Asian	1988*** (188.9)	1740*** (188.2)	2070*** (186)	1846*** (185.5)
Black	1026*** (307.1)	897*** (305.1)	1126*** (301.9)	1006*** (300.4)
Mixed	713** (330.7)	748** (328.5)	911*** (325.2)	935*** (323.4)
Other	537 (678.7)	471 (674.2)	736 (667.3)	670 (663.7)
<b>(Dis)ability (ref. No known disability)</b>				
Known disability	-984*** (188.6)	-820*** (187.6)	-889*** (185.5)	-747*** (184.7)
<b>Age</b>				
	1084*** (61)	1080*** (60.6)	1071*** (60)	1068*** (59.7)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>				
Intermediate occupations	-557*** (142.6)	-562*** (141.6)	-510*** (140.2)	-516*** (139.4)
Routine and manual occupations	-1286*** (144.7)	-1318*** (143.8)	-1179*** (142.4)	-1212*** (141.6)
Never worked and long term unemployed	-2561 (1664.7)	-2417 (1653.6)	-2484 (1636.6)	-2360 (1627.6)
<b>UCAS Tariff Points</b>				
	7*** (0.6)	7*** (0.6)	7*** (0.6)	7*** (0.6)
<b>Degree classification (ref. 2:1)</b>				
Unclassified <sup>13</sup>	6165*** (303.5)	5981*** (301.7)	5937*** (298.8)	5782*** (297.3)
3rd	-2972*** (369.1)	-2987*** (366.6)	-2511*** (363.3)	-2544*** (361.3)
2:2	-1778*** (149.5)	-1823*** (148.5)	-1468*** (147.4)	-1520*** (146.6)
1st	2137*** (146.8)	2125*** (145.8)	1927*** (144.5)	1925*** (143.7)



**Table 5: Comparing the effect of motivation and creative/non-creative subject on earnings**  
(continued)

	(1)	(2)	(3)	(4)
<b>HEI type (ref. post-1992)</b>				
Russell group	3144*** (162.4)	2541*** (164.8)	3048*** (159.7)	2513*** (162.2)
Other pre-1992	1414*** (154.7)	953*** (155.8)	1416*** (152.1)	1004*** (153.4)
Specialist arts institutions	-789* (468.8)	1185** (478.6)	-773* (460.9)	992** (471.2)
<b>Employment type (ref. Full-time employed)</b>				
Part-time employed	-11610*** (233)	-11341*** (231.9)	-10627*** (231.9)	-10429*** (230.9)
Self-employed/freelance/business owner	-4337*** (275.1)	-3709*** (275.5)	-4222*** (270.7)	-3665*** (271.3)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>				
Both desirability and necessity			761*** (162.6)	750*** (161.7)
Desirability alone			2276*** (159.4)	2224*** (158.5)
Necessity alone			-2377*** (185.4)	-2239*** (184.6)
<b>Subject (ref. Non-creative subject)</b>				
Creative subject		-2999*** (168)		-2682*** (165.8)
<b>Adjusted R<sup>2</sup></b>	<b>0.257</b>	<b>0.267</b>	<b>0.281</b>	<b>0.289</b>
<b>Observations</b>	<b>23,440</b>	<b>23,440</b>	<b>23,440</b>	<b>23,440</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

Our next set of regression results show differences between those working inside and outside the creative industries and creative occupations in greater detail. [Table 6](#) shows the effect of studying a creative subject for those working outside the creative industries (model 5), inside the creative industries (model 6), in non-creative occupations (model 7), in creative occupations (model 8), and working as creative specialists – i.e. in creative occupations inside the creative industries – (model 10), or not (model 9). As we have previously seen that creative graduates perceive high levels of desirability for jobs working in the creative industries, and that, based on raw averages, creative graduates are earning more when working in the creative industries,<sup>14</sup> we might expect to see less of a negative effect on earnings of studying a creative subject for those working in creative sectors. However, we actually find the opposite. For those working outside the creative industries, having a creative degree negatively affects income by approximately £2,400 a year. But for those working in the creative industries, having a creative degree negatively affects income by approximately £3,600 a year. We might be drawn to assume that this is due to creative graduates taking up support roles in the creative industries – i.e. non creative occupations. However, we see a similar pattern for those working as creative specialists, with creative graduates working in creative roles inside the creative industries earning approximately £3,300 less a year than non-creative graduates in these jobs, compared to creative graduates in non-creative specialist roles earning £2,600 a year less. Additionally, the difference in effect between those working in creative and non-creative occupations is smaller (£2,660 compared to £2,740). This suggests that while the creative industries may be paying creative graduates more than other sectors, the gap between creative and non-creative earnings is bigger in the creative industries than other sectors. Considering the large numbers of creative graduates working in the creative industries, a considerable proportion of the difference in overall earnings could therefore be explained by the disproportionately low wages in the creative sector.

These regression results also show interesting findings in relation to those working self-employed, freelance or running their own business. We find that, when operating inside the creative industries, working for yourself negatively effects earnings by approximately £5,400 a year, compared with full-time employment. However, for those operating outside the creative industries the discrepancy reduces to approximately £2,200 a year. This further indicates that the relationship between earnings and being self-employed, freelance or a business owner operates differently in the creative industries than elsewhere in the economy. That similar discrepancies are also evident when comparing between those working inside and outside creative occupations and between those working or not working as creative specialists indicates that this pattern is characteristic of creative work, being evident across the creative economy.

The final point to highlight from the regressions so far is the impact of specialist arts institutions. This report finds that attending a specialist arts institution such as a conservatoire, has a larger positive effect on earnings for those who go on to work in the creative industries than attending a Russell Group university. For those working in the creative industries, attending a Russell Group university, as opposed to a post-1992 university, increases earnings by approximately £900 a year, whereas attending a specialist arts institution increases earnings by approximately £1,500 a year. This finding is indicative the value placed on specialist arts education by creative industries employers.

**Table 6: Comparing the effect of studying a creative/non-creative subject on earnings (5) outside creative industries | (6) inside creative industries | (7) outside creative occupations | (8) inside creative occupations | (9) not working as creative specialist | (10) working as creative specialist**

	(5)	(6)	(7)	(8)	(9)	(10)
<b>Gender (ref. Female)</b>						
Male	3201*** (118.3)	2706*** (318.4)	3140*** (119.9)	3077*** (288.5)	3210*** (115.2)	2537*** (407.9)
<b>Ethnicity (ref. White)</b>						
Asian	1726*** (194.2)	2482*** (626)	1805*** (195.1)	1937*** (605.1)	1822*** (190.2)	1546* (868.5)
Black	1119*** (322.8)	114 (825)	1077*** (320)	192 (861.3)	1035*** (310.7)	216 (1199.3)
Mixed	950*** (349.4)	776 (853)	1015*** (351)	431 (820.6)	949*** (338.1)	388 (1108.2)
Other	1019 (685.2)	-4478* (2505)	1110 (711)	-2546 (1816.7)	1010 (678.8)	-6284** (3013)
<b>(Dis)ability (ref. No known disability)</b>						
Known disability	-818*** (198.4)	-243 (499.7)	-966*** (201.2)	300 (462.1)	-851*** (192.4)	425 (655.8)
<b>Age</b>						
	1091*** (63.5)	778*** (173.1)	1079*** (64.3)	954*** (159.3)	1093*** (61.9)	692*** (224.6)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>						
Intermediate occupations	-606*** (148.2)	-172 (407.5)	-659*** (150.1)	144 (374.4)	-611*** (144.6)	295 (524.3)
Routine and manual occupations	-1357*** (150)	-114 (425.1)	-1465*** (152.4)	353 (383.3)	-1375*** (146.7)	766 (550.7)
Never worked and long term unemployed	-2124 (1706.3)	-4268 (5229)	-2386 (1623.7)		-2405 (1621.8)	
<b>UCAS Tariff Points</b>						
	7*** (0.6)	6*** (1.6)	7*** (0.6)	4*** (1.4)	7*** (0.6)	6*** (2)
<b>Degree classification (ref. 2:1)</b>						
Unclassified	5790*** (304.4)	1489 (1516.4)	5723*** (306.4)	2407 (1574.9)	5688*** (301)	2820 (2378.1)
3rd	-2485*** (377.1)	-2969** (1220.8)	-2677*** (379.2)	-665 (1198.3)	-2639*** (370.3)	-830 (1649.7)
2:2	-1562*** (154.7)	-1073** (457.2)	-1561*** (156.4)	-1147*** (422.9)	-1497*** (151)	-1824*** (627.2)
1st	2012*** (156.1)	1442*** (370.3)	1963*** (159.1)	1772*** (335.3)	1985*** (151.5)	1398*** (460.4)

Table 6: Comparing the effect of studying a creative/non-creative subject on earnings (5) outside creative industries | (6) inside creative industries | (7) outside creative occupations | (8) inside creative occupations | (9) not working as creative specialist | (10) working as creative specialist (continued)

	(5)	(6)	(7)	(8)	(9)	(10)
<b>HEI type (ref. post-1992)</b>						
Russell group	2740*** (172.4)	888* (480.9)	2570*** (174.6)	2282*** (443.8)	2646*** (168.1)	1012 (635.1)
Other pre-1992	1094*** (162.8)	179 (454.2)	1070*** (164.6)	410 (422.4)	1101*** (158.6)	-642 (609.1)
Specialist arts institutions	628 (618.5)	1491** (752.1)	1189* (642.2)	782 (701.9)	994* (573.8)	842 (861.7)
<b>Employment type (ref. Full-time employed)</b>						
Part-time employed	-10296*** (240)	-11416*** (823.4)	-10403*** (240)	-9342*** (871.5)	-10414*** (234.3)	-9531*** (1365.1)
Self-employed/freelance/ business owner	-2204*** (354.6)	-5399*** (461.9)	-2300*** (343.5)	-5852*** (455.7)	-2716*** (327.8)	-5376*** (534.7)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>						
Both desirability and necessity	791*** (172.8)	762* (456.4)	727*** (174.9)	732* (424.7)	763*** (167.9)	650 (607.3)
Desirability alone	2320*** (169.6)	1918*** (444.9)	2319*** (171.6)	1688*** (415)	2307*** (164.8)	1477** (591.3)
Necessity alone	-2362*** (195.4)	-887 (566.7)	-2372*** (196.1)	-646 (556.2)	-2297*** (189.7)	-476 (837.3)
<b>Subject (ref. Non-creative subject)</b>						
Creative subject	-2418*** (195.7)	-3648*** (375.4)	-2735*** (205.7)	-2657*** (342.7)	-2587*** (185.7)	-3293*** (488.6)
<b>Adjusted R<sup>2</sup></b>	<b>0.304</b>	<b>0.214</b>	<b>0.307</b>	<b>0.196</b>	<b>0.300</b>	<b>0.180</b>
<b>Observations</b>	<b>20,317</b>	<b>3,080</b>	<b>19,928</b>	<b>3,468</b>	<b>21,519</b>	<b>1,847</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

**Table 7: Comparing the effect of subject on earnings (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist**

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<b>Gender (ref. Female)</b>								
Male	2480*** (117.3)	2540*** (115.8)	2619*** (123.9)	1894*** (330.1)	2596*** (125.6)	1698*** (300.2)	2628*** (120.6)	1355*** (426.6)
<b>Ethnicity (ref. White)</b>								
Asian	941*** (186.4)	1093*** (184.3)	999*** (192.9)	1698*** (619.2)	1054*** (194.1)	1342** (590.2)	1072*** (189)	830 (852.4)
Black	366 (299.3)	489* (295.4)	620* (317.4)	-506 (813.7)	522* (314.8)	88 (837.6)	498 (305.6)	-310 (1173.4)
Mixed	645** (321)	811** (316.8)	786** (342.1)	680 (838.6)	837** (343.8)	457 (797.6)	803** (331.1)	405 (1083.4)
Other	282 (658.6)	458 (649.8)	805 (670.7)	-4810* (2461.2)	871 (695.9)	-2282 (1765.3)	782 (664.6)	-5597* (2945.5)
<b>(dis)ability (ref. No known disability)</b>								
Known disability	-812*** (183.3)	-745*** (180.9)	-837*** (194.3)	-117 (492.2)	-964*** (197.1)	273 (450.6)	-845*** (188.5)	323 (643.4)
<b>Age</b>								
	1091*** (60.8)	807*** (60)	820*** (64)	815*** (171.7)	808*** (64.8)	804*** (156.4)	878*** (62.4)	828*** (221.5)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>								
Intermediate occupations	-549*** (138.3)	-503*** (136.5)	-595*** (145.1)	-93 (400.7)	-634*** (146.9)	165 (363.8)	-600*** (141.6)	419 (511.8)
Routine and manual occupations	-1354*** (140.5)	-1249*** (138.7)	-1385*** (146.9)	-260 (418.5)	-1460*** (149.2)	110 (373.3)	-1397*** (143.7)	545 (539.3)
Never worked and long term unemployed	-2521 (1614.8)	-2450 (1593.3)	-2292 (1669.6)	-3425 (5134.4)	-2400 (1588.9)		-2495 (1587.3)	
<b>UCAS Tariff</b>								
	7*** (0.6)	7*** (0.6)	7*** (0.6)	7*** (1.6)	7*** (0.6)	7*** (1.4)	4*** (0.6)	7*** (2)
<b>Degree classification (ref. 2:1)</b>								
Unclassified	1805*** (438)	1971*** (432.3)	2056*** (448)	1244 (1569.4)	2012*** (450.2)	1288 (1571.9)	1934*** (439.8)	2036 (2437.8)
3rd	-3223*** (359.2)	-2799*** (354.8)	-2714*** (370.2)	-3499*** (1204)	-2813*** (372.3)	-1732 (1169.2)	-2840*** (363.6)	-1594 (1620.6)
2:2	-1923*** (145.8)	-1633*** (144.3)	-1656*** (152.2)	-1439*** (452.1)	-1628*** (153.9)	-1709*** (412.8)	-1587*** (148.6)	-2453*** (614.8)
1st	1716*** (143.8)	1556*** (142)	1661*** (154.1)	1055*** (368.4)	1612*** (157.1)	1129*** (329.3)	1626*** (149.6)	833* (454)

Table 7: Comparing the effect of subject on earnings (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist (continued)

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<b>HEI type (ref. post-1992)</b>								
Russell group	2730*** (166.4)	2647*** (164.2)	2808*** (174.2)	1425*** (494.5)	2646*** (176.5)	2599*** (456.8)	2739*** (170.1)	1479** (653.2)
Other pre-1992	1142*** (154)	1138*** (152)	1220*** (161.3)	235 (454.7)	1194*** (163)	478 (418.6)	1221*** (157.1)	-437 (605.9)
Specialist arts institutions	1089** (467.3)	907** (461.2)	490 (605.1)	1471** (738.5)	1117* (628.3)	620 (681.5)	873 (561.5)	803 (840.1)
<b>Employment type (ref. Full-time employed)</b>								
Part-time employed	-10867*** (227.2)	-10072*** (226.6)	-9972*** (235.3)	-10615*** (817.1)	-10047*** (235.4)	-8652*** (849.5)	-10065*** (229.9)	-8867*** (1343.7)
Self-employed/freelance/ business owner	-3540*** (269.4)	-3497*** (266)	-2230*** (347.6)	-5019*** (455.8)	-2295*** (336.6)	-5366*** (444.5)	-2645*** (321.3)	-4901*** (524.9)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>								
Both desirability and necessity		567*** (159)	611*** (169.9)	545 (450)	545*** (171.9)	644 (413.2)	580*** (165.1)	454 (593.7)
Desirability alone		2016*** (155.7)	2101*** (166.5)	1759*** (438.8)	2114*** (168.5)	1470*** (403.7)	2092*** (161.8)	1231** (577.7)
Necessity alone		-2041*** (180.8)	-2147*** (191.3)	-942* (559)	-2158*** (192)	-528 (541.1)	-2097*** (185.8)	-405 (817)
<b>Subject (ref. All creative graduates)</b>								
Agriculture	1007 (661)	689 (652.3)	624 (658.7)	-5248 (7947.1)	919 (674.4)	-1546 (3205.6)	709 (657)	-4901 (12181.8)
Building and planning	8745*** (529.3)	8093*** (522.9)	7999*** (539.9)	6808*** (2526.8)	8627*** (566.9)	5166*** (1485.2)	8168*** (535.1)	5191 (3202.1)
Biological and sport sciences	348 (258.5)	176 (255.2)	-44 (276.3)	2153** (1056.6)	279 (284.2)	859 (945.4)	117 (268.5)	1133 (1555.3)
Business and management	4264*** (216.8)	3951*** (214.4)	3736*** (241.9)	4769*** (570.5)	4338*** (251.1)	1675*** (516)	3952*** (231.2)	3054*** (877.2)
Combined and general studies	576 (903.9)	206 (892)	-718 (957.4)	5600** (2560.2)	-271 (997.9)	2393 (1972.1)	-175 (920)	6502 (3982.8)
Computing	6145*** (349)	5690*** (344.8)	5514*** (439.9)	6291*** (596.4)	4435*** (464.3)	7516*** (536)	5456*** (400.1)	7228*** (731.3)
Education and teaching	2448*** (319.9)	1823*** (316.9)	1768*** (331.2)	967 (3468.9)	2037*** (338.7)	1253 (3079.9)	1838*** (326.4)	4912 (5508.8)
Engineering and technology	4974*** (271.5)	4626*** (268.3)	4672*** (296.2)	2577*** (787.2)	4939*** (303.3)	2524*** (758.9)	4708*** (285.8)	1166 (1073.2)
Geography and environment	2044*** (306.1)	1946*** (302.2)	1803*** (324)	2000* (1117)	2245*** (332.3)	-355 (977.4)	1910*** (314.6)	1177 (1833.8)
History, philosophy and religion	722*** (277.9)	654** (274.3)	574* (306.4)	756 (686.8)	964*** (313.2)	-401 (649)	675** (293.8)	215 (905)

**Table 7: Comparing the effect of subject on earnings (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist (continued)**

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Language and area studies	196 (263.2)	181 (259.7)	124 (295.7)	413 (590.8)	443 (306.4)	-148 (532)	268 (282.2)	-24 (754.7)
Law	2906*** (296.5)	2571*** (292.9)	2366*** (312.2)	4142*** (1446.5)	2645*** (318.7)	4562*** (1485.2)	2475*** (304.8)	7248*** (2496.2)
Mathematical sciences	5829*** (356)	5507*** (351.5)	5103*** (386.2)	7799*** (932.7)	5476*** (389.6)	6984*** (936.2)	5374*** (371.2)	7698*** (1282.7)
Medicine and dentistry	9601*** (532.6)	8868*** (526.5)	8528*** (549.3)	-169 (4991.5)	8889*** (554.8)	114 (7769.6)	8736*** (539.9)	1084 (7991.9)
Physical sciences	2566*** (339.3)	2442*** (334.9)	1945*** (361.8)	6320*** (1035.3)	2153*** (368.1)	6616*** (975.8)	2142*** (351.4)	7978*** (1378.6)
Psychology	551* (296.7)	431 (292.8)	239 (311.4)	2369* (1358.4)	532* (318.9)	1347 (1219.6)	411 (304.1)	752 (2202.1)
Social sciences	3814*** (244)	3622*** (240.9)	3437*** (265)	4697*** (791.4)	3843*** (272.1)	2727*** (774.6)	3619*** (255.7)	3304*** (1208.6)
Allied to medicine	4581*** (263.3)	3990*** (261.1)	3799*** (280.3)	4977** (2155.7)	4120*** (288.3)	3042* (1616.7)	3909*** (274)	5329** (2597.3)
Veterinary sciences	3322*** (966.7)	2672*** (954.2)	2561*** (966.6)	-1811 (6572.1)	2896*** (970)	-6237 (8136)	2741*** (961.8)	-6584 (8553.2)
<b>Adjusted R<sup>2</sup></b>	<b>0.301</b>	<b>0.320</b>	<b>0.334</b>	<b>0.244</b>	<b>0.337</b>	<b>0.244</b>	<b>0.330</b>	<b>0.223</b>
<b>Observations</b>	<b>23,440</b>	<b>23,440</b>	<b>20,317</b>	<b>3,080</b>	<b>19,928</b>	<b>3,468</b>	<b>21,519</b>	<b>1,847</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

The final regression table (Table 7) shows the results of a more granular analysis of subject earnings by disaggregating non-creative graduates into the range of subject groups they represent. Models 11 and 12 show the effect of subject choice on earnings for the full graduate population with and without controlling for motivation. Subsequent models are similar to those in Table 6, with model 13 examining those working outside the creative industries, model 14 those inside the creative industries, model 15 those in non-creative occupations, model 16 those in creative occupations, and models 17 and 18 those working not as creative specialists and as creative specialists.

While the previous regression results show studying a creative subject has a negative effect on earnings when compared to all non-creative subjects, when we apply a more granular analysis, we find that for some specific non-creative subjects, this is not the case. The report finds that there is no statistically significant difference in the effect on earnings between studying a creative subject and studying a variety of other subjects, including biology, languages, and psychology. This is broadly in line with findings from other studies, which found these graduates to have lower life-time returns than other graduate groups (Britton et al., 2020). However, it is still striking to find that the earnings of these graduates are not significantly different to those of creative graduates three and a half years after graduation, especially when considering that these are subjects which large numbers of students take and which reflect the breadth of higher education; STEM, humanities and social sciences respectively.

## 4

## Conclusions

### Conclusion

This report explores why creative graduates are found to receive lower pay than non-creative graduates and whether we might see different trends for graduates working in the creative industries. In assessing the relationship between degree type, motivation for entering work and earnings outcomes, the report sought to provide evidence as to the value of creative higher education both to graduates and to the creative industries.

The report finds that large numbers of creative graduates are gaining employment in jobs that match their skills profile and that they are gaining meaningful employment in jobs which are exactly the type of work they want to do. This is strong evidence that creative higher education is providing significant value to graduates in providing them the skills needed to gain employment in their chosen career, independent of the implication for salary.

The report also finds that a disproportionately high number of graduates working in the creative industries have a creative degree, and that the largest graduate group in each creative sub-sector is the group who have taken degrees in a subject which aligns to that sub-sector. This evidences the value of creative skills gained through higher education to the creative industries, by demonstrating the extent to which the sector relies on these highly skilled and specialist graduates. Moreover, the high proportion of creative graduates working in creative jobs outside the creative industries indicates the value of high-level creative skills to other sectors of the economy.

The finding that, on average, creative graduates earn more when working in the creative industries than working outside the creative industries, is encouraging; suggesting that, with continued growth of the sector, more graduates will be able to find higher paid work in these industries. However, the parallel finding that the earnings gap between creative and non-creative graduates is larger in the creative industries than outside the creative industries shows how even this gain in earnings does not necessarily eradicate the difference in earnings between creative graduates and other graduate groups. It is not that creative graduates are being paid poorly by the creative industries, per se, but that the creative industries are paying non-creative graduates disproportionately well and thus compounding the earnings gap between creative and non-creative graduates. Put simply, the creative industries are both paying creative graduates well relative to other sectors and poorly relative to other graduates.

Finally, the finding that creative graduates are considerably more likely to take jobs outside the creative industries not because they are the jobs that they want, but because they feel they need that job in order to earn a living, helps to explain why creative graduate earnings outside the creative industries are lower than for non-creative graduates, as they are more likely to have wanted to work in those jobs. If creative graduates were just as likely to view work in non-creative sectors as a viable career path, then perhaps they would pursue those careers and end up earning more than they currently do.



Taken together, these findings demonstrate that creative higher education is providing creative graduates with the high-level skills required to work in their chosen careers, but that these skills are not being remunerated at the same level as non-creative graduates. Creative graduates appear to be being paid less than their non-creative counterparts outside the creative industries, as they are less motivated to take up employment in these sectors, and being paid relatively less when working in the creative industries, as creative sectors are paying them less than that other graduate groups.

Crucially, this argument does not mean that the creative industries do not value creative graduates, or that the economy does not need these types of skills. Rather, it suggests that motivation factors are skewing what might otherwise operate in equilibrium. If creative graduates were just as happy to work in non-creative sectors, then the creative industries would have to compete more with non-creative sectors to secure the talent they need, just as they do for non-creative graduates. This suggests that the desires of creative graduates to work in the creative industries, both in creative and non-creative occupations, means that creative industries employers are not having to use pay to attract and retain creative graduates in quite the same manner as they do non-creative graduates. The issue, therefore, may not be that there are too many creative graduates, relative to creative jobs, but simply that pay cannot be seen as an accurate indicator of market forces, when individuals are not using pay as the primary basis on which to make their career choices.

## Policy recommendations

Based on the evidence presented here, the report makes several recommendations.

### Recommendations for government:

- The report's findings suggest that it would be unwise to enact policy which curtails the supply of creative graduates as this is likely to damage the pipeline of creative talent on which the creative industries rely.
- Creative higher education also complements and adds value to the prospects of non-creative graduates, by supporting a sector which pays non-creative graduates more than elsewhere in the economy. As such, if a reduction in creative graduates were to damage the viability of the sector, we may find that limiting subsidy of creative education lowers the economic returns across other subjects, producing a net negative effect on graduate returns.
- As the creative industries produce significant GVA for the country, in assessing the economic returns of different subjects to the Exchequer the government should look to commission work which assesses a broader range of Exchequer revenues and identifies the impact that graduates from different subjects have on business and sales taxes.
- The Department for Education and other relevant bodies could also look to publish data on graduate outcomes in specific industry sectors, either by making available more granular level graduate employment data (e.g. at the 4 digit SIC level), or by aggregating industry employment into more recognisable groupings, such as the creative industries, etc.

## Recommendations for the higher education sector

- The higher education sector should look to actively encourage creative students to acknowledge that careers outside of the creative industries have value and that working in alternative sectors should not represent a failure of artistic talent or lack of commitment to artistic principles.
- Educators and careers advisors could better inform students of the transferable value of the skills they develop in creative higher education and to identify non-creative sectors and occupations where their skills might be valued and meaningfully applied.
- The higher education sector could strengthen partnerships between HEIs and employers in both creative and non-creative industries, building a closer association between creative graduates and employers.
- Careers services in creative institutions could put more resources towards actively marketing creative graduates to high-status non-creative employers.

## Future areas of work

As acknowledged in the policy recommendations, more work is needed which links graduate subject choice to growth prospects of the industries in which these graduates are typically employed. This has been done to a limited extent in this report, but future work could consider the range of higher education courses and employment across all industry sectors to gain a more holistic understanding of the value higher education provides. Future work could also look to assess the returns to other forms of education, such as apprenticeships and further education, in this manner.

The finding that creative graduates are earning less on average than non-creative graduates in the creative industries also requires further investigation. Specifically, further work is needed which assesses the commensurability of the skills profiles and task compositions of creative and non-creative graduates working in the creative industries.

While not a focus of this report, future work should look to interpret the findings of this report in relation to issues of diversity and to build on this evidence in investigating the impact of factors such as gender, ethnicity and class for creative graduates and creative workers.

As the findings of this report suggest that creative graduates have very different career pathways to non-creative graduates three and a half years after graduation, it would be valuable to see how earnings data changes for these graduates over time, in relation to employment in specific sectors such as the creative industries. Additionally, whilst this report goes some way to painting a picture of creative graduate employment in the creative industries, with a larger dataset future work could look to offer more detailed sub-sector level analysis than has been possible here.

More research is also needed to identify the work that is currently being done in linking creative higher education courses with industry, so that connections between universities and the creative industries can be strengthened. Equally, the value of creative graduates to non-creative industries, and non-creative occupations, requires substantial further investigation.

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## 6

## Endnotes

1. Exceptions to this are the work of Comunian et al. (2011) and Ball et al. (2010) who do examine creative graduates in the creative industries. However, these papers are almost ten years old and, as such, more current evidence is needed.
2. As the data is based on self-reported pay it may be able to capture earnings of business owners, freelancers and those working self-employed. However, it is plausible that these figures are underestimations of true earnings for these groups, as graduates are asked about 'basic pay', which is likely to be interpreted as excluding company profits and dividend payments.
3. The CAH was devised to map between JACS and the new HECoS subject coding system which came into effect in 2019/20. Whilst groupings can be made based on JACS principle subjects, CAH has been designed to better reflect similarities between subjects and therefore is a more accurate and contemporary method of subject grouping.
4. Note that 'Hair services', 'Make-up', and 'Ceramics' which all fall within the 'Design and creative and performing arts' group would not be considered aligned to a creative industries sector (ceramics here refers to a materials science course). However, as no graduates in either sample used in this report took these courses, these exceptions were not applied.
5. Any subject which spans multiple creative industries sub-sectors, (e.g. 'Others in creative arts and design') is classified as a broad creative subject rather than placing it in a specific sub-group. Graduates who have undertaken a joint honours degree in subjects which span multiple creative subject sub-groups, and do not also include any non-creative subject are also classified under this broad creative subject definition.
6. Arguably, all of the 'computing' group is aligned to the creative industries sub-sector IT, software and computer services. However, in order not to verge too far from extant conceptualisations of creative higher education, only those computing subjects which are undeniably directly relevant to the creative industries have been included in this definition. Appendix A shows the results of sensitivity tests conducted using a definition of creative subjects which includes all computing subjects.
7. Earnings data was provided in 5,000 bands, and following Vries (2014) the mid-point of each band was used in the regressions. Those earning over £70,000 a year who are already top coded in the dataset (1.7 per cent of the DLHE Long sample; 1.8 per cent of non-creative graduates, 1.0 per cent of creative graduates) were excluded from the analysis. As such, it is important to regard the earnings figures stated in this report as approximations only.
8. Note that some graduates may have been engaged in multiple activities, but this figure relates only to the activity they felt was most important. For example, some graduates who put their main activity as 'employed' may also be in further study, or vice versa.
9. This anomaly may be due to the fact that much craft work is not captured by current SIC codes and therefore many craft graduates might be engaged in work which would be considered craft based, but is not captured using the DCMS classification of creative industries used in this report.
10. Engineering activities here refers to SIC 71.1 (with the exclusion of SIC 71.11). Legal activities refer to all of SIC 69.1.
11. Supplementary analysis showing all subject groups can be found in Appendix B
12. It is of course possible that these motivations factors could be endogenous. However the disproportionate effect of these motivation factors on creative graduates, relative to non-creative graduates, suggests that it is still a useful variable to consider in exploring the differences between these two groups.
13. 'Unclassified' relates predominately to graduates who took courses that do not confer honours. 42.8 per cent of these graduates completed medicine and dentistry degrees and a further 10.8 per cent took degrees in subjects allied to medicine.
14. This holds even when controlling for demographic, attainment, work related and motivation factors.

## 7

## Appendices

### Appendix A – Sensitivity Analysis

This appendix offers some comparison between the subject categorisation used in this report and two other potential categorisations. The first, is the subject categorisation used in the most recent report from the IFS (CAH2 1.2). This categorisation is based on an older version of the CAH groupings than this report uses (version 1.2 rather than version 1.3.3) and is taken at a slightly more granular level (level 2 rather than level 1). The second is the same categorisation used in this report, but with all of the computing CAH1 group included, rather than only the subjects relating to computer games and a narrow definition of software.

Table 8 shows the breakdown of the graduate population in our data using each definition. By using the definition we do in this report, the proportion of creative graduates is roughly 6 percentage points higher than if we had only included the CAH2 1.2 definition of creative arts and design subjects. Adding all of computing, would have made creative graduates account for roughly 3 percentage points more of the graduate population. Note that as graduates who had studied a joint honours degree in which parts of their degree were classified in different grouping were excluded from analysis, the sample sizes using different categorisations change.

Table 9 shows the effect on earnings of being a creative graduate or not, using each definition. It shows that the difference in the effect of being a creative graduate as defined in this report is only marginally different to the effect when creative is defined as the CAH2 1.2 definition of creative arts and design subjects. However, if this report had included all of computing in its definition of a creative graduate, the effect on earnings of being a creative graduate nearly halves.

Table 8: Comparison of subject classifications and proportions

This report's subject groupings	%	Subject groupings used in the IFS report	%	This report's subject groupings plus all computing	%
<b>All Creative</b>	<b>17.3%</b>	<b>All Creative</b>	<b>11.7%</b>	<b>All Creative</b>	<b>20.5%</b>
Advertising and marketing	0.2%			Advertising and marketing	0.2%
Architecture	1.2%			Architecture	1.2%
Crafts	0.1%			Crafts	0.1%
Design	4.3%			Design	4.3%
Film, TV, radio and photography	3.4%			Film, TV, radio and photog-raphy	3.4%
IT and software	0.8%			IT and software	4.0%
Publishing	1.0%			Publishing	1.0%
Museums, galleries and libraries	0.0%			Museums, galleries and libraries	0.0%
Music, performing and visual art	5.3%			Music, performing and visual art	5.3%
Broad creative subject	0.9%	Creative arts and design	11.7%	Broad creative subject	0.9%
<b>All Non-creative</b>	<b>82.7%</b>	<b>All Non-creative</b>	<b>88.3%</b>	<b>All Non-creative</b>	<b>79.5%</b>
Agriculture	0.7%	Agriculture, food and related studies	0.7%	Agriculture	0.7%
Building and planning	1.3%	Architecture, building and planning	2.5%	Building and planning	1.3%
Biological and sport sciences	6.8%	Biosciences	3.7%	Biological and sport sciences	6.8%
Business and management	16.5%	Business and management	16.9%	Business and management	16.5%
		Celtic studies	0.0%		
		Chemistry	1.1%		
Combined and general studies	0.4%	Combined and general studies	0.4%	Combined and general studies	0.4%
		Communications and media	3.1%		
Computing	3.1%	Computing	4.0%		
		Economics	2.1%		
Education and teaching	3.6%	Education and teaching	3.6%	Education and teaching	3.6%
Engineering and technology	6.7%	Engineering	6.2%	Engineering and technology	6.7%
		English studies	3.5%		
Geography and environment	2.9%	Geographical and environmental studies	2.3%	Geography and environment	2.9%
		Health and social care	1.0%		
History, philosophy and religion	4.6%	History and archaeology	3.2%	History, philosophy and religion	4.6%
		Humanities and liberal arts (non-specific)	0.0%		
Language and area studies	5.4%	Languages, linguistics and classics	2.3%	Language and area studies	5.4%
Law	4.6%	Law	4.7%	Law	4.6%
Mathematical sciences	2.2%	Mathematical sciences	2.2%	Mathematical sciences	2.2%
Medicine and dentistry	2.6%	Medicine and dentistry	2.7%	Medicine and dentistry	2.6%
		Nursing	2.3%		

Table 8: Comparison of subject classifications and proportions (continued)

This report's subject groupings	%	Subject groupings used in the IFS report	%	This report's subject groupings plus all computing	%
		Pharmacology, toxicology and pharmacy	1.2%		
		Philosophy and religious studies	1.0%		
Physical sciences	2.6%	Physical, material and forensic sciences	1.1%	Physical sciences	2.6%
		Physics and astronomy	1.0%		
		Politics	1.6%		
Psychology	3.9%	Psychology	3.9%	Psychology	3.9%
Social sciences	7.8%	Sociology, social policy and anthropology	2.8%	Social sciences	7.8%
		Sport and exercise sciences	3.2%		
Allied to medicine	6.8%	Subjects allied to medicine not otherwise specified	3.4%	Allied to medicine	6.8%
		Technology	0.6%		
Veterinary sciences	0.2%	Veterinary sciences	0.2%	Veterinary sciences	0.2%
<b>n=289,005</b>		<b>n=284,970</b>		<b>n=289,285</b>	

**Table 9: Comparing the effect of creative/non-creative subject on earnings across subject classification methods**

	This report's subject groupings	This report's subject groupings	Subject groupings used in the IFS report	Subject groupings used in the IFS report	This report's subject groupings plus all computing	This report's subject groupings plus all computing
<b>Gender (ref. Female)</b>						
Male	3089*** (112.2)	3156*** (110.6)	2985*** (113.2)	3064*** (111.5)	3171*** (112.9)	3229*** (111.2)
<b>Ethnicity (ref. White)</b>						
Asian	1740*** (188.2)	1846*** (185.5)	1820*** (189.4)	1919*** (186.7)	1880*** (188.6)	1970*** (185.8)
Black	897*** (305.1)	1006*** (300.4)	910*** (307)	1017*** (302.2)	966*** (306.2)	1070*** (301.3)
Mixed	748** (328.5)	935*** (323.4)	766** (331.5)	968*** (326.4)	735** (329.9)	926*** (324.7)
Other	471 (674.2)	670 (663.7)	565 (684.9)	742 (674)	475 (677.2)	677 (666.2)
<b>(dis)ability (ref. No known disability)</b>						
Known disability	-820*** (187.6)	-747*** (184.7)	-841*** (189.1)	-756*** (186.2)	-898*** (188.3)	-818*** (185.3)
<b>Age</b>						
	1091*** (60.6)	1080*** (59.7)	1068*** (61.1)	1113*** (60.1)	1097*** (60.8)	1086*** (59.8)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>						
Intermediate occupations	-562*** (141.6)	-516*** (139.4)	-570*** (142.5)	-520*** (140.3)	-547*** (142.2)	-499*** (139.9)
Routine and manual occupations	-1318*** (143.8)	-1212*** (141.6)	-1281*** (144.8)	-1171*** (142.6)	-1291*** (144.3)	-1185*** (142.1)
Never worked and long term unemployed	-2417 (1653.6)	-2360 (1627.6)	-2752 (1705.3)	-2754 (1678.2)	-2408 (1661)	-2352 (1634)
<b>UCAS Tariff</b>						
	7*** (0.6)	7*** (0.6)	7*** (0.6)	7*** (0.6)	7*** (0.6)	7*** (0.6)
<b>Degree classification (ref. 2:1)</b>						
Unclassified	5981*** (301.7)	5782*** (297.3)	5953*** (302.1)	5757*** (297.6)	6015*** (302.7)	5808*** (298.1)
3rd	-2987*** (366.6)	-2544*** (361.3)	-3019*** (368.7)	-2550*** (363.3)	-3020*** (367.6)	-2570*** (362)
2:2	-1823*** (148.5)	-1520*** (146.6)	-1815*** (149.7)	-1516*** (147.8)	-1816*** (149.1)	-1506*** (147.1)
1st	2125*** (145.8)	1925*** (143.7)	2196*** (146.9)	1991*** (144.8)	2187*** (146.5)	1975*** (144.3)



**Table 9: Comparing the effect of creative/non-creative subject on earnings across subject classification methods (continued)**

	This report's subject groupings	This report's subject groupings	Subject groupings used in the IFS report	Subject groupings used in the IFS report	This report's subject groupings plus all computing	This report's subject groupings plus all computing
<b>HEI type (ref. post-1992)</b>						
Russell group	2541*** (164.8)	2513*** (162.2)	2854*** (164.3)	2795*** (161.7)	2814*** (164.7)	2763*** (162.1)
Other pre-1992	953*** (155.8)	1004*** (153.4)	1233*** (156.1)	1257*** (153.6)	1156*** (155.8)	1192*** (153.3)
Specialist arts institutions	1185** (478.6)	992** (471.2)	1267*** (484.7)	1086** (477)	334 (477.8)	210 (470.1)
<b>Employment type (ref. Full-time employed)</b>						
Part-time employed	-11341*** (231.9)	-10429*** (230.9)	-11318*** (234.4)	-10410*** (233.3)	-11473*** (232.7)	-10528*** (231.7)
Self-employed/freelance/ business owner	-3709*** (275.5)	-3665*** (271.3)	-3771*** (277.1)	-3728*** (272.8)	-4005*** (275.9)	-3934*** (271.6)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>						
Both desirability and necessity		750*** (161.7)		760*** (163)		771*** (162.3)
Desirability alone		2224*** (158.5)		2231*** (159.9)		2259*** (159.1)
Necessity alone		-2239*** (184.6)		-2265*** (186.4)		-2302*** (185.2)
<b>Subject (ref. Non-creative subject)</b>						
Creative subject	-2999*** (168)	-2682*** (165.8)	-3095*** (202.6)	-2791*** (199.7)	-1773*** (154.5)	-1553*** (152.2)
<b>Adjusted R<sup>2</sup></b>	<b>0.267</b>	<b>0.289</b>	<b>0.266</b>	<b>0.289</b>	<b>0.261</b>	<b>0.285</b>
<b>Observations</b>	<b>23,440</b>	<b>23,440</b>	<b>23,085</b>	<b>23,085</b>	<b>23,467</b>	<b>23,467</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

## Appendix B – Supplementary Findings Including Full Subject Breakdowns

Table 10: Creative industries graduate workforce breakdown by subject

	All Creative Industries		Advertising and marketing		Architecture		Crafts		Design: product, graphic and fashion design		Film, TV, video, radio and photography		IT, software and computer services		Publishing		Museums, galleries and libraries		Music, performing and visual arts	
	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years	6 months	3.5 years
Agriculture	0.1%	0.1%	0.3%	0.0%	0.2%	0.0%	1.7%	-	0.0%	0.3%	0.1%	0.1%	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.1%	0.1%
Building and planning	0.7%	0.4%	0.3%	0.1%	6.8%	6.9%	0.0%	-	0.6%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%
Biological and sport sciences	1.6%	1.8%	2.4%	3.6%	0.0%	0.2%	1.7%	-	0.4%	1.0%	1.9%	1.8%	1.5%	1.7%	2.8%	1.9%	3.7%	2.1%	1.2%	0.2%
Business and management	9.1%	9.6%	24.7%	20.0%	1.4%	1.5%	10.0%	-	4.9%	3.6%	5.1%	4.6%	11.3%	13.0%	9.3%	6.5%	4.0%	3.6%	2.9%	3.4%
Combined and general studies	0.4%	0.3%	0.8%	0.4%	0.2%	0.3%	0.0%	-	0.2%	0.2%	0.4%	0.2%	0.2%	0.5%	0.7%	0.2%	0.5%	0.0%	0.3%	0.1%
Computing	7.5%	9.4%	3.1%	3.1%	0.2%	0.6%	1.7%	-	1.5%	1.3%	2.3%	2.2%	34.8%	31.4%	1.3%	1.2%	0.8%	0.9%	0.6%	0.6%
Education and teaching	0.3%	0.2%	0.3%	0.3%	0.0%	0.0%	0.0%	-	0.1%	0.0%	0.3%	0.3%	0.2%	0.2%	0.5%	0.2%	1.3%	0.8%	0.3%	0.3%
Engineering and technology	3.6%	4.2%	1.3%	2.0%	2.6%	8.1%	3.3%	-	3.4%	4.3%	4.7%	4.5%	7.3%	7.2%	1.1%	0.9%	1.3%	1.4%	3.0%	3.1%
Geography and environment	1.4%	1.6%	2.3%	2.5%	1.7%	3.2%	0.0%	-	0.2%	0.0%	1.1%	1.7%	1.9%	1.9%	1.2%	1.4%	2.4%	1.1%	0.7%	0.6%
History, philosophy and religion	4.6%	6.1%	6.6%	9.0%	1.2%	2.2%	3.3%	-	1.3%	1.8%	3.6%	4.9%	2.1%	2.3%	9.1%	10.2%	34.8%	31.9%	3.5%	5.3%
Language and area studies	7.5%	8.8%	12.0%	11.0%	1.0%	1.3%	5.0%	-	1.7%	2.5%	6.5%	8.7%	2.7%	3.4%	26.6%	28.7%	9.8%	17.2%	5.8%	5.3%
Law	1.0%	1.1%	1.4%	1.5%	0.2%	0.0%	0.0%	-	0.4%	0.3%	0.8%	0.6%	1.3%	1.4%	2.1%	2.3%	1.1%	0.9%	0.7%	0.4%
Mathematical sciences	1.6%	2.3%	1.6%	1.9%	0.3%	0.5%	0.0%	-	0.2%	0.0%	0.7%	0.6%	5.5%	6.4%	0.7%	1.8%	0.5%	0.9%	0.5%	0.1%
Medicine and dentistry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Physical sciences	1.3%	1.9%	0.7%	1.0%	0.2%	0.4%	0.0%	-	0.3%	0.2%	0.5%	0.8%	4.8%	4.8%	0.9%	2.2%	2.9%	2.7%	0.3%	0.3%
Psychology	1.4%	1.3%	3.2%	2.7%	0.1%	0.0%	0.0%	-	0.7%	0.5%	1.5%	0.9%	1.2%	1.3%	1.4%	1.6%	1.6%	0.4%	0.8%	0.6%

Table 10: Creative industries graduate workforce breakdown by subject (continued)

	All Creative Industries		Advertising and marketing		Architecture		Crafts		Design: product, graphic and fashion design		Film, TV, video, radio and photography		IT, software and computer services		Publishing		Museums, galleries and libraries		Music, performing and visual arts	
Social sciences	3.4%	3.8%	7.2%	7.3%	0.3%	0.0%	3.3%	-	0.6%	1.7%	2.5%	3.0%	3.8%	3.7%	5.8%	4.7%	4.5%	4.4%	1.9%	1.2%
Allied to medicine	0.4%	0.4%	0.8%	1.0%	0.1%	0.0%	0.0%	-	0.1%	0.0%	0.2%	0.3%	0.5%	0.3%	1.2%	0.7%	1.1%	0.0%	0.2%	0.1%
Veterinary sciences	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Advertising and marketing	0.8%	0.7%	3.8%	2.9%	0.1%	0.0%	0.0%	-	0.4%	0.5%	0.3%	0.1%	0.2%	0.2%	0.3%	0.4%	0.0%	0.0%	0.2%	0.0%
Architecture	6.1%	3.4%	0.2%	0.4%	74.8%	61.8%	0.0%	-	3.7%	3.6%	0.3%	0.1%	0.3%	0.2%	0.3%	0.1%	0.5%	1.0%	0.4%	0.1%
Crafts	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	21.7%	-	0.5%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.2%	0.1%
Design	12.7%	11.0%	11.0%	9.0%	6.2%	7.7%	31.7%	-	67.3%	60.8%	6.0%	5.5%	5.5%	4.7%	8.8%	9.3%	6.1%	5.4%	6.0%	4.8%
Film, TV, radio and photography	10.8%	10.1%	6.0%	8.2%	1.1%	1.6%	3.3%	-	3.4%	3.7%	43.0%	38.3%	2.8%	3.1%	6.6%	6.2%	8.2%	6.8%	4.5%	5.6%
IT and software	2.5%	3.0%	1.4%	0.9%	0.1%	0.0%	0.0%	-	1.2%	1.8%	1.4%	1.9%	9.5%	8.5%	0.6%	1.0%	0.5%	0.6%	0.5%	0.6%
Publishing	2.8%	3.1%	3.3%	4.2%	0.1%	0.0%	0.0%	-	0.5%	0.5%	4.3%	4.5%	0.4%	0.7%	11.6%	11.9%	0.8%	1.3%	1.7%	1.1%
Museums, galleries and libraries	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Music, performing and visual art	16.5%	12.8%	2.9%	4.1%	0.8%	2.8%	10.0%	-	5.0%	8.3%	9.3%	10.1%	1.3%	1.9%	3.8%	3.9%	11.6%	13.5%	61.9%	63.8%
Broad creative subject	1.9%	2.2%	2.4%	2.7%	0.5%	1.1%	3.3%	-	1.5%	2.0%	3.1%	4.4%	0.7%	0.7%	3.3%	2.7%	1.3%	1.9%	1.7%	2.2%
<b>All Creative (subtotal)</b>	<b>54.3%</b>	<b>46.5%</b>	<b>31.1%</b>	<b>32.5%</b>	<b>83.6%</b>	<b>74.9%</b>	<b>70.0%</b>	<b>-</b>	<b>83.5%</b>	<b>82.0%</b>	<b>67.9%</b>	<b>64.9%</b>	<b>20.8%</b>	<b>20.1%</b>	<b>35.2%</b>	<b>35.4%</b>	<b>29.0%</b>	<b>31.6%</b>	<b>77.2%</b>	<b>78.3%</b>
<b>All Non-creative (subtotal)</b>	<b>45.7%</b>	<b>53.5%</b>	<b>68.9%</b>	<b>67.5%</b>	<b>16.4%</b>	<b>25.1%</b>	<b>30.0%</b>	<b>-</b>	<b>16.5%</b>	<b>18.0%</b>	<b>32.1%</b>	<b>35.1%</b>	<b>79.2%</b>	<b>79.9%</b>	<b>64.8%</b>	<b>64.6%</b>	<b>71.0%</b>	<b>68.4%</b>	<b>22.8%</b>	<b>21.7%</b>

DLHE n=17915 | DLHE Long base n= 6035 | DLHE Long weighted n=6074

Table 11: Top 5 most common occupations for graduates at 6 months and 3.5 years full subject breakdown

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
All Non-creative	Sales and retail assistants Advertising and marketing occupations Medical practitioners Primary and nursery education teaching Nurses		Primary and nursery education teaching Advertising and marketing occupations Sales accounts and business development managers Secondary education teaching professionals IT, software and computer services occupations	
Agriculture	Animal care services occupations n.e.c. Sales and retail assistants Managers and proprietors in agri and horticulture Farmers Agricultural scientists		Animal care services occupations n.e.c. Managers and proprietors in agri and horticulture Secondary education teaching professionals Engineering professionals n.e.c. Farmers	
Building and planning	Quantity surveyors Chartered surveyors Construction project managers and related pros. Architecture occupations Production managers and directors in construction		Quantity surveyors Chartered surveyors Construction project managers and related pros. Architecture occupations Production managers and directors in construction	
Biological and sport sciences	Sales and retail assistants Sports coaches, instructors and officials  Teaching assistants Laboratory technicians Bar staff		Secondary education teaching professionals Primary and nursery education teaching professionals Biochemists, medical scientists Sports coaches, instructors and officials Laboratory technicians	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Business and management	Advertising and marketing occupations Sales and retail assistants Chartered and certified accountants Human resources and industrial relations officers Other administrative occupations n.e.c.		Advertising and marketing occupations Sales accounts and business dev. managers Teaching and other educational professions n.e.c. Business and related associate professions n.e.c. Secondary education teaching professionals	
Combined and general studies	Sales and retail assistants Advertising and marketing occupations Other administrative occupations n.e.c. Teaching and other educational professions n.e.c. Business and related associate professions n.e.c.		Advertising and marketing occupations Sales accounts and business dev. managers Teaching and other educational professions n.e.c. Business and related associate professions n.e.c. Secondary education teaching professionals	
Computing	IT, software and computer services occupations IT user support technicians Sales and retail assistants IT and telecommunications professionals n.e.c. IT operations technicians		IT, software and computer services occupations IT and telecommunications professionals n.e.c. IT user support technicians IT operations technicians IT specialist managers	
Education and teaching	Primary and nursery education teaching pros. Teaching assistants Nursery nurses and assistants Teaching and other educational professions n.e.c. Sales and retail assistants		Primary and nursery education teaching pros. Teaching and other educational professions n.e.c. Teaching assistants Snr. professionals of educational establishments Nursery nurses and assistants	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Engineering and technology	Mechanical engineers Civil engineers Engineering professionals n.e.c. Design and development engineers Production and process engineers		Engineering professionals n.e.c. Design and development engineers Civil engineers Mechanical engineers IT, software and computer services occupations	
Geography and environment	Sales and retail assistants Advertising and marketing occupations Other administrative occupations n.e.c. Business and related associate professions n.e.c. Environment professionals		Environment professionals Sales accounts and business dev. managers Secondary education teaching professionals Advertising and marketing occupations Business and related associate professions n.e.c.	
History, philosophy and religion	Sales and retail assistants Advertising and marketing occupations Other administrative occupations n.e.c. Teaching and other educational professions n.e.c. Bar staff		Advertising and marketing occupations Secondary education teaching professionals Primary and nursery education teaching pros. Other administrative occupations n.e.c. Sales accounts and business dev. managers	
Language and area studies	Advertising and marketing occupations Sales and retail assistants Teaching and other educational professions n.e.c. Publishing occupations Other administrative occupations n.e.c.		Advertising and marketing occupations Secondary education teaching professionals Publishing occupations Primary and nursery education teaching pros. Sales accounts and business dev. managers	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Law	Legal associate professionals Sales and retail assistants Other administrative occupations n.e.c. Legal professionals n.e.c. Human resources and industrial relations officers		Solicitors Legal associate professionals Legal professionals n.e.c. Police officers (sergeant and below) Other administrative occupations n.e.c.	
Mathematical sciences	Finance and investment analysts and advisers IT, software and computer services occupations Chartered and certified accountants Business and related associate professions n.e.c. Secondary education teaching professionals		Secondary education teaching professionals Chartered and certified accountants IT, software and computer services occupations Actuaries Management consultants and business analysts	
Medicine and dentistry	Medical practitioners Dental practitioners Medical and dental technicians Sales and retail assistants Health associate professionals n.e.c.		Medical practitioners Dental practitioners Medical and dental technicians Management consultants and business analysts Higher education teaching professionals	
Physical sciences	Sales and retail assistants Laboratory technicians IT, software and computer services occupations Research/ development chemists Chemists		IT, software and computer services occupations Secondary education teaching professionals Laboratory technicians Engineering professionals n.e.c. Business and related associate professions n.e.c.	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Psychology	Sales and retail assistants Teaching assistants Care workers and home carers Welfare and housing associate professionals n.e.c. Other administrative occupations n.e.c.		Psychologists Primary and nursery education teaching pros. Care workers and home carers Human resources and industrial relations officers Welfare and housing associate professionals n.e.c.	
Social sciences	Sales and retail assistants Finance and investment analysts and advisers Advertising and marketing occupations Social workers Other administrative occupations n.e.c.		Social workers Finance and investment analysts and advisers Advertising and marketing occupations Welfare and housing associate professionals n.e.c. Management consultants and business analysts	
Allied to medicine	Nurses Pharmacists Physiotherapists Medical radiographers Midwives		Nurses Pharmacists Physiotherapists Midwives Medical radiographers	
Veterinary sciences	Veterinarians Veterinary nurses Health professionals n.e.c. Animal care services occupations n.e.c. Waiters and waitresses		Veterinarians Veterinary nurses Higher education teaching professionals Science, engineering and production techs. n.e.c. Animal care services occupations n.e.c.	



Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
All Creative	<p>Sales and retail assistants</p> <p>Design: product, graphic and fashion design occupations</p> <p>Music, performing and visual arts occupations</p> <p>Film, TV, video, radio and photography occupations</p> <p>Advertising and marketing occupations</p>		<p>Design: product, graphic and fashion design occupations</p> <p>Advertising and marketing occupations</p> <p>Film, TV, video, radio and photography occupations</p> <p>Music, performing and visual arts occupations</p> <p>IT, software and computer services occupations</p>	
Advertising and marketing	<p>Advertising and marketing occupations</p> <p>Sales and retail assistants</p> <p>Other administrative n.e.c.</p> <p>Business sales executives</p> <p>Waiters and waitresses</p>		<p>Advertising and marketing occupations</p> <p>Sales accounts and business development managers</p> <p>Conference and exhibition managers and organisers</p> <p>Publishing occupations</p> <p>Financial accounts managers</p>	
Architecture	<p>Design: product, graphic and fashion design occupations</p> <p>Sales and retail assistants</p> <p>Draughtspersons</p> <p>Bar staff</p>		<p>Design: product, graphic and fashion design occupations</p> <p>Draughtspersons</p> <p>Sales and retail assistants</p> <p>Business and financial project management pros.</p>	
Craft	<p>Design: product, graphic and fashion design occupations</p> <p>Sales and retail assistants</p> <p>Waiters and waitresses</p> <p>Customer service n.e.c.</p> <p>Receptionists</p>		<p>Sales and retail assistants</p> <p>Design: product, graphic and fashion design occupations</p> <p>Advertising and marketing occupations</p> <p>Crafts occupations</p> <p>Music, performing and visual arts occupations</p>	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Design	Design: product, graphic and fashion design occupations Sales and retail assistants Advertising and marketing occupations IT, software and computer services occupations Music, performing and visual arts occupations		Design: product, graphic and fashion design occupations Advertising and marketing occupations IT, software and computer services occupations Sales and retail assistants Sales accounts and business development managers	
Film, TV, radio and photography	Film, TV, video, radio and photography occupations Sales and retail assistants Advertising and marketing occupations Bar staff Music, performing and visual arts occupations		Film, TV, video, radio and photography occupations Advertising and marketing occupations Other administrative n.e.c. Sales accounts and business development managers Music, performing and visual arts occupations	
IT and software	IT, software and computer services occupations Sales and retail assistants Design: product, graphic and fashion design occupations IT operations technicians IT and telecommunications professionals n.e.c.		IT, software and computer services occupations IT and telecommunications professionals n.e.c. IT user support technicians Film, TV, video, radio and photography occupations Music, performing and visual arts occupations	

Table 11: Top 5 most common occupations for graduates at 6 months and 3 years full subject breakdown (continued)

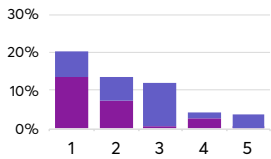
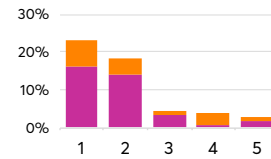
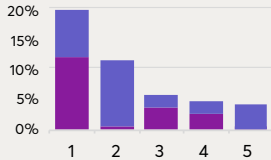
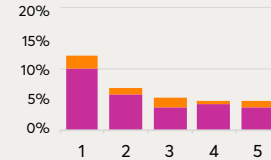
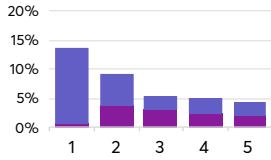
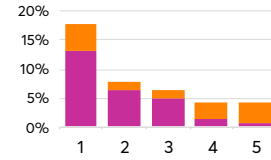
Graduate group	Top 5 most common occupations at 6 months		Top 5 most common occupations at 3.5 years	
Publishing	Publishing occupations Advertising and marketing occupations Sales and retail assistants Film, TV, video, radio and photography occupations Bar staff		Advertising and marketing occupations Publishing occupations Film, TV, video, radio and photography occupations Sales and retail assistants Sales accounts and business development managers	
Music, performing and visual art	Music, performing and visual arts occupations Sales and retail assistants Film, TV, video, radio and photography occupations Teaching and other educational professionals n.e.c. Bar staff		Music, performing and visual arts occupations Film, TV, video, radio and photography occupations Teaching and other educational professionals n.e.c. Primary and nursery education teaching Secondary education teaching professionals	
Broad creative subject	Sales and retail assistants Advertising and marketing occupations Film, TV, video, radio and photography occupations Publishing occupations Design: product, graphic and fashion design occupations		Advertising and marketing occupations Film, TV, video, radio and photography occupations Publishing occupations Other administrative n.e.c. Sales and retail assistants	

Figure 12: Raw average earnings by subject group and proportion of graduates working self-employed, freelance or running their own business at 3.5 years after graduation



## Appendix C – Econometric Analysis of DLHE

Table 12: Comparing the effect of motivation and creative/non-creative subject on earnings 6 months after graduation

	(1)	(2)	(3)	(4)
<b>Gender (ref. Female)</b>				
Male	1617*** (50)	1614*** (49.7)	1644*** (48.3)	1641*** (48)
<b>Ethnicity (ref. White)</b>				
Asian	881*** (89.2)	721*** (88.8)	829*** (86.2)	691*** (85.9)
Black	814*** (149.7)	750*** (148.7)	891*** (144.5)	834*** (143.8)
Mixed	251* (148.2)	273* (147.3)	355** (143.1)	372*** (142.3)
Other	483 (314.1)	412 (312)	531* (303.2)	469 (301.6)
<b>(Dis)ability (ref. No known disability)</b>				
Known disability	-2 (84.2)	94 (83.7)	-39 (81.3)	46 (80.9)
<b>Age</b>				
	1084*** (26.7)	916*** (26.5)	913*** (25.8)	810*** (25.7)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>				
Intermediate occupations	-194*** (63)	-207*** (62.6)	-155** (60.8)	-167*** (60.5)
Routine and manual occupations	-420*** (64.1)	-453*** (63.7)	-334*** (61.9)	-365*** (61.6)
Never worked and long term unemployed	-1372** (671.7)	-1374** (667.3)	-1567** (648.4)	-1562** (644.9)
<b>UCAS Tariff Points</b>				
	7*** (0.3)	4*** (0.3)	4*** (0.3)	3*** (0.3)
<b>Degree classification (ref. 2:1)</b>				
Unclassified	5009*** (121.6)	4911*** (120.8)	4406*** (117.8)	4334*** (117.2)
3rd	-1032*** (165.6)	-1056*** (164.5)	-710*** (159.9)	-738*** (159)
2:2	-557*** (67.7)	-603*** (67.3)	-355*** (65.4)	-399*** (65.1)
1st	1535*** (64.3)	1537*** (63.9)	1212*** (62.3)	1220*** (61.9)

Table 12: Comparing the effect of motivation and creative/non-creative subject on earnings 6 months after graduation (continued)

	(1)	(2)	(3)	(4)
<b>HEI type (ref. post-1992)</b>				
Russell group	1686*** (71)	1301*** (71.8)	1654*** (68.5)	1317*** (69.4)
Other pre-1992	883*** (69.1)	594*** (69.4)	861*** (66.7)	608*** (67.1)
Specialist arts institutions	-1246*** (198.8)	185 (204)	-1220*** (192)	30 (197.2)
<b>Employment type (ref. Full-time employed)</b>				
Part-time employed	-10334*** (72.6)	-10208*** (72.2)	-8963*** (73.3)	-8883*** (73)
Self-employed/freelance/business owner	-5061*** (144.9)	-4562*** (145)	-5191*** (139.9)	-4753*** (140.2)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>				
Both desirability and necessity			1555*** (81.8)	1547*** (81.4)
Desirability alone			1999*** (61.7)	1961*** (61.4)
Necessity alone			-2191*** (69.7)	-2134*** (69.4)
<b>Subject (ref. Non-creative subject)</b>				
Creative subject		-2120*** (75.8)		-1857*** (73.3)
<b>Adjusted R<sup>2</sup></b>	<b>0.385</b>	<b>0.393</b>	<b>0.427</b>	<b>0.434</b>
<b>Observations</b>	<b>58,714</b>	<b>58,714</b>	<b>58,714</b>	<b>58,714</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

**Table 13: Comparing the effect of studying a creative/non-creative subject on earnings 6 months after graduation (5) outside creative industries | (6) inside creative industries | (7) outside creative occupations | (8) inside creative occupations | (9) not working as creative specialist | (10) working as creative specialist**

	(5)	(6)	(7)	(8)	(9)	(10)
<b>Gender (ref. Female)</b>						
Male	1628*** (50.8)	1884*** (149.9)	1581*** (51.8)	2030*** (129)	1643*** (49.9)	1816*** (180.9)
<b>Ethnicity (ref. White)</b>						
Asian	598*** (89)	1734*** (318.1)	574*** (89.9)	1778*** (286.4)	655*** (87.7)	1410*** (412.8)
Black	875*** (149.7)	471 (503.1)	864*** (152)	648 (433.5)	876*** (147.3)	268 (645.7)
Mixed	394*** (151.7)	355 (407.9)	445*** (153.8)	29 (369.2)	392*** (148.3)	149 (497.3)
Other	463 (311.1)	283 (1167.1)	407 (317.6)	879 (938.4)	406 (307.7)	1635 (1452.3)
<b>(Dis)ability (ref. No known disability)</b>						
Known disability	44 (86.3)	-25 (229.3)	55 (87.9)	-133 (203.8)	58 (84.5)	-259 (272.5)
<b>Age</b>						
	1091*** (27)	838*** (82.1)	474*** (27.5)	826*** (72)	597*** (26.6)	831*** (99.3)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>						
Intermediate occupations	-216*** (63.7)	150 (190.8)	-176*** (64.9)	-65 (164.3)	-214*** (62.6)	335 (228.8)
Routine and manual occupations	-373*** (64.4)	-382* (205.1)	-357*** (65.6)	-382** (176.3)	-380*** (63.4)	-280 (249.5)
Never worked and long term unemployed	-1876*** (681.9)	126 (1946.2)	-1947*** (693.5)	684 (1719.7)	-1833*** (661.1)	2793 (2819.2)
<b>UCAS Tariff Points</b>						
	7*** (0.3)	4*** (0.7)	2*** (0.3)	4*** (0.6)	2*** (0.3)	4*** (0.9)
<b>Degree classification (ref. 2:1)</b>						
Unclassified	4216*** (119.4)	4261*** (787)	4244*** (120.2)	4271*** (790.5)	4209*** (118.8)	5127*** (989.7)
3rd	-815*** (163.5)	218 (657.9)	-873*** (165.7)	1018* (557.3)	-825*** (161.8)	1596* (848.6)
2:2	-431*** (67.8)	-76 (227.5)	-436*** (68.8)	-46 (200.2)	-441*** (66.8)	266 (286.9)
1st	1287*** (66.3)	836*** (172)	1224*** (68.3)	1208*** (146)	1250*** (65)	970*** (202.3)

Table 13: Comparing the effect of studying a creative/non-creative subject on earnings 6 months after graduation (5) outside creative industries | (6) inside creative industries | (7) outside creative occupations | (8) inside creative occupations | (9) not working as creative specialist | (10) working as creative specialist (continued)

	(5)	(6)	(7)	(8)	(9)	(10)
<b>HEI type (ref. post-1992)</b>						
Russell group	1378*** (73.1)	808*** (221.1)	1343*** (74.4)	1066*** (193.6)	1368*** (71.8)	615** (272.9)
Other pre-1992	606*** (70.3)	656*** (219.6)	602*** (71.6)	637*** (189.7)	617*** (69.1)	449 (273.8)
Specialist arts institutions	95 (249.7)	174 (330.6)	-23 (263.3)	223 (298.6)	29 (234.1)	151 (366.1)
<b>Employment type (ref. Full-time employed)</b>						
Part-time employed	-8899*** (75.1)	-8305*** (303.8)	-8872*** (75.4)	-8001*** (300.2)	-8906*** (74)	-7266*** (461.3)
Self-employed/freelance/ business owner	-3987*** (183.2)	-5378*** (233.7)	-4000*** (185.8)	-5658*** (218.8)	-4180*** (170.4)	-5549*** (259.5)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>						
Both desirability and necessity	1705*** (86.5)	458* (240.2)	1794*** (88.9)	231 (202.9)	1636*** (84.8)	605** (291.2)
Desirability alone	2146*** (65)	730*** (188.8)	2217*** (66.5)	619*** (160.8)	2092*** (63.8)	726*** (232.3)
Necessity alone	-2161*** (72.1)	-1618*** (257.2)	-2145*** (72.9)	-1104*** (236.9)	-2173*** (70.9)	-462 (357.9)
<b>Subject (ref. Non-creative subject)</b>						
Creative subject	-1598*** (85.5)	-2113*** (173)	-1670*** (90.6)	-2045*** (149.8)	-1669*** (82.1)	-1984*** (209.3)
<b>Adjusted R<sup>2</sup></b>	<b>0.450</b>	<b>0.292</b>	<b>0.454</b>	<b>0.290</b>	<b>0.445</b>	<b>0.264</b>
<b>Observations</b>	<b>52,408</b>	<b>6,251</b>	<b>50,673</b>	<b>8,021</b>	<b>54,632</b>	<b>4,008</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.



**Table 14: Comparing the effect of subject on earnings 6 months after graduation**  
 (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<b>Gender (ref. Female)</b>								
Male	1195*** (51.7)	1202*** (50.5)	1205*** (53.4)	1293*** (155.5)	1189*** (54.4)	1149*** (134.4)	1218*** (52.4)	1007*** (187.9)
<b>Ethnicity (ref. White)</b>								
Asian	182** (86.8)	237*** (84.8)	155* (87.8)	1227*** (314.9)	140 (88.7)	1282*** (280.5)	203** (86.6)	1007** (404.8)
Black	524*** (143.9)	610*** (140.4)	650*** (146)	189 (494.8)	647*** (148.4)	466 (423)	649*** (143.9)	123 (631.1)
Mixed	368*** (142)	417*** (138.6)	399*** (147.5)	427 (401.2)	479*** (149.6)	90 (360.3)	416*** (144.3)	168 (486.7)
Other	111 (300.9)	207 (293.6)	192 (302.5)	2 (1146.7)	130 (308.8)	780 (914.7)	142 (299.4)	1352 (1418.9)
<b>(dis)ability (ref. No known disability)</b>								
Known disability	77 (80.8)	40 (78.8)	51 (84)	-79 (225.5)	59 (85.5)	-190 (198.6)	60 (82.3)	-290 (266.3)
<b>Age</b>								
	1091*** (26.4)	631*** (25.8)	589*** (27.2)	597*** (81.2)	431*** (27.6)	584*** (70.7)	504*** (26.7)	600*** (97.5)
<b>Parental occupation (ref. Managerial, administrative, and professional occupations)</b>								
Intermediate occupations	-214*** (60.4)	-173*** (58.9)	-204*** (61.9)	55 (187.6)	-163*** (63.1)	-166 (160.4)	-211*** (60.9)	249 (223.5)
Routine and manual occupations	-516*** (61.5)	-426*** (60)	-424*** (62.7)	-491** (201.9)	-397*** (63.8)	-561*** (172.2)	-432*** (61.8)	-456* (243.9)
Never worked and long term unemployed	-1729*** (643.3)	-1817*** (627.5)	-2097*** (662.7)	-114 (1911.3)	-2147*** (674.1)	789 (1676.3)	-2065*** (643.1)	2854 (2751.7)
<b>UCAS Tariff</b>								
	7*** (0.3)	4*** (0.3)	4*** (0.3)	4*** (0.7)	3*** (0.3)	4*** (0.6)	3*** (0.3)	4*** (0.9)
<b>Degree classification (ref. 2:1)</b>								
Unclassified	1660*** (192.5)	1633*** (187.8)	1519*** (192.9)	3746*** (780.9)	1486*** (193.4)	3816*** (771.6)	1518*** (191.3)	4494*** (968.2)
3rd	-1230*** (159)	-949*** (155.2)	-1034*** (159.4)	104 (650)	-1069*** (161.6)	772 (544.3)	-1034*** (157.9)	1393* (833.3)
2:2	-710*** (65.2)	-521*** (63.7)	-542*** (66.3)	-296 (225.2)	-551*** (67.2)	-279 (196.1)	-552*** (65.4)	-24 (281.6)
1st	1109*** (62.3)	897*** (60.9)	957*** (65.2)	589*** (170.2)	904*** (67.1)	838*** (143.5)	923*** (63.8)	663*** (199.2)

Table 14: Comparing the effect of subject on earnings 6 months after graduation (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist (continued)

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<b>HEI type (ref. post-1992)</b>								
Russell group	1411*** (71.6)	1336*** (69.9)	1314*** (73.5)	1449*** (229)	1273*** (74.8)	1629*** (199.3)	1335*** (72.2)	1177*** (281.6)
Other pre-1992	737*** (67.7)	677*** (66)	639*** (69.2)	898*** (219.2)	642*** (70.5)	757*** (187.8)	669*** (68)	551** (271.4)
Specialist arts institutions	60 (196.7)	-75 (191.9)	-22 (242.7)	227 (324.8)	-141 (255.9)	197 (291.1)	-78 (227.7)	174 (357.4)
<b>Employment type (ref. Full-time employed)</b>								
Part-time employed	-9546*** (70.5)	-8532*** (71.4)	-8547*** (73.4)	-7924*** (299.8)	-8515*** (73.7)	-7579*** (293.4)	-8552*** (72.4)	-6780*** (452.3)
Self-employed/freelance/ business owner	-4123*** (139.9)	-4345*** (136.6)	-3524*** (178.3)	-5101*** (230.7)	-3519*** (180.9)	-5330*** (214.2)	-3745*** (165.9)	-5176*** (255.2)
<b>Motivation for taking job (ref. Neither desirability nor necessity)</b>								
Both desirability and necessity		1259*** (79.6)	1395*** (84.5)	321 (236.7)	1475*** (86.9)	17 (198.3)	1338*** (82.9)	464 (284.7)
Desirability alone		1581*** (60.4)	1725*** (64)	648*** (185.9)	1783*** (65.6)	442*** (157.2)	1681*** (62.9)	681*** (227)
Necessity alone		-1893*** (67.7)	-1916*** (70.3)	-1423*** (253.6)	-1900*** (71.1)	-908*** (231.4)	-1932*** (69.2)	-333 (351.3)
<b>Subject (ref. All creative graduates)</b>								
Agriculture	870*** (289.1)	500* (282.1)	242 (287)	2754 (1810.8)	351 (291.5)	2050 (1350.3)	301 (286.2)	3317 (2076.4)
Building and planning	3452*** (217.7)	2765*** (212.7)	2673*** (221.7)	984 (891.7)	2888*** (227.3)	592 (709.2)	2673*** (218.1)	-173 (1339.1)
Biological and sport sciences	130 (115.1)	134 (112.3)	-38 (120.4)	972* (534.1)	108 (124)	476 (466.3)	13 (117.9)	2121*** (780.1)
Business and management	2399*** (93.8)	2134*** (91.7)	1898*** (102.7)	3040*** (252.7)	2102*** (108)	2106*** (206.4)	2034*** (99.2)	2048*** (343)
Combined and general studies	921** (368.4)	1026*** (359.4)	924** (385.9)	681 (994.9)	1329*** (394)	-841 (878.3)	961** (375.3)	455 (1243.9)
Computing	4590*** (153.3)	4066*** (149.8)	3963*** (178.9)	4110*** (286.2)	3153*** (207.7)	4834*** (227.5)	3911*** (171.8)	4589*** (313.1)
Education and teaching	3969*** (127.5)	3166*** (125.2)	3009*** (132)	-2158 (1735.9)	3131*** (135.8)	-527 (1542.2)	3050*** (130.2)	90 (3161.5)
Engineering and technology	5347*** (120)	4908*** (117.4)	4894*** (128.2)	2435*** (404.3)	5085*** (133.2)	2687*** (335.4)	4890*** (125)	963* (529)
Geography and environment	1270*** (141.1)	1367*** (137.6)	1198*** (145.9)	2048*** (564)	1437*** (150.1)	315 (460.4)	1307*** (143)	-879 (841)
History, philosophy and religion	-62 (127.4)	154 (124.3)	59 (135.8)	-62 (352.7)	224 (139.3)	-422 (323.8)	71 (131.6)	172 (459.5)

**Table 14: Comparing the effect of subject on earnings 6 months after graduation (11) total sample without motivation | (12) total sample | (13) outside creative industries | (14) inside creative industries | (15) outside creative occupation | (16) inside creative occupation | (17) not working as creative specialist | (18) working as creative specialist (continued)**

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Language and area studies	-429*** (119.2)	-217* (116.4)	-239* (129.9)	-512* (287.7)	-193 (134.3)	-481* (255.4)	-220* (125.4)	-564 (348.1)
Law	584*** (141.9)	686*** (138.5)	532*** (145.4)	1698** (735.6)	705*** (148.5)	306 (663.4)	612*** (143)	-62 (1268.6)
Mathematical sciences	3308*** (160.2)	3150*** (156.3)	2922*** (168.7)	3719*** (467.4)	3037*** (172.5)	3759*** (427.9)	2957*** (164.3)	4457*** (604.7)
Medicine and dentistry	6857*** (234.4)	6079*** (229.2)	5998*** (238.2)		6223*** (241)		6008*** (235.7)	
Physical sciences	1990*** (159)	1990*** (155.1)	1702*** (165.5)	3297*** (526.3)	1809*** (169)	3648*** (478.5)	1784*** (162.1)	3880*** (671.5)
Psychology	-119 (131.5)	-35 (128.3)	-228* (136.1)	1156** (560.1)	-105 (139.4)	1159** (503.5)	-146 (133.5)	914 (803.5)
Social sciences	2579*** (109.1)	2513*** (106.4)	2420*** (115.9)	1804*** (374.8)	2603*** (119.6)	1006*** (350.8)	2466*** (112.8)	741 (521.6)
Allied to medicine	3811*** (108.4)	3034*** (106.8)	2867*** (115.4)	1206 (887.5)	3009*** (119.6)	754 (921.7)	2908*** (113.1)	675 (1244.4)
Veterinary sciences	3095*** (374.6)	2395*** (365.7)	2275*** (369)		2479*** (372)	-736 (5543.7)	2313*** (368.8)	
<b>Adjusted R<sup>2</sup></b>	<b>0.437</b>	<b>0.464</b>	<b>0.481</b>	<b>0.318</b>	<b>0.485</b>	<b>0.326</b>	<b>0.476</b>	<b>0.300</b>
<b>Observations</b>	<b>58,714</b>	<b>58,714</b>	<b>52,408</b>	<b>6,251</b>	<b>50,673</b>	<b>8,021</b>	<b>54,632</b>	<b>4,008</b>

Standard errors in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

## Appendix D – Full Creative Subject Categorisation

Table 15: Creative Subject definition

JACS 3 Code	JACS 3 Name	CAH group
<b>Advertising and marketing</b>		
N561	Advertising	(CAH17) business and management
P200	Publicity studies	(CAH24) media, journalism and communications
P210	Public relations	(CAH24) media, journalism and communications
P290	Publicity studies not elsewhere classified	(CAH24) media, journalism and communications
<b>Architecture</b>		
K100	Architecture	(CAH13) architecture, building and planning
K110	Architectural design theory	(CAH13) architecture, building and planning
K120	Interior architecture	(CAH25) design, and creative and performing arts
K130	Architectural technology	(CAH13) architecture, building and planning
K190	Architecture not elsewhere classified	(CAH13) architecture, building and planning
K300	Landscape and garden design	(CAH13) architecture, building and planning
K310	Landscape architecture	(CAH13) architecture, building and planning
K320	Landscape studies	(CAH13) architecture, building and planning
K390	Landscape and garden design not elsewhere elsewhere	(CAH13) architecture, building and planning
K330	Landscape design	(CAH13) architecture, building and planning
<b>Crafts</b>		
W700	Crafts	(CAH25) design, and creative and performing arts
W710	Fabric and leather crafts	(CAH25) design, and creative and performing arts
W711	Needlecraft	(CAH25) design, and creative and performing arts
W712	Dressmaking	(CAH25) design, and creative and performing arts
W713	Soft furnishing	(CAH25) design, and creative and performing arts
W714	Weaving	(CAH25) design, and creative and performing arts
W715	Leatherwork	(CAH25) design, and creative and performing arts
W720	Metal crafts	(CAH25) design, and creative and performing arts
W721	Silversmithing/goldsmithing	(CAH25) design, and creative and performing arts
W722	Blacksmithing	(CAH25) design, and creative and performing arts
W723	Clock/watchmaking	(CAH25) design, and creative and performing arts
W730	Wood crafts	(CAH25) design, and creative and performing arts
W731	Carpentry/joinery	(CAH25) design, and creative and performing arts
W732	Cabinet making	(CAH25) design, and creative and performing arts
W733	Marquetry and inlaying	(CAH25) design, and creative and performing arts

Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
W734	Veneering	(CAH25) design, and creative and performing arts
W740	Surface decoration	(CAH25) design, and creative and performing arts
W750	Clay and stone crafts	(CAH25) design, and creative and performing arts
W751	Pottery	(CAH25) design, and creative and performing arts
W752	Tile making	(CAH25) design, and creative and performing arts
W753	Stone crafts	(CAH25) design, and creative and performing arts
W760	Reed crafts	(CAH25) design, and creative and performing arts
W761	Basketry	(CAH25) design, and creative and performing arts
W762	Thatching	(CAH25) design, and creative and performing arts
W770	Glass crafts	(CAH25) design, and creative and performing arts
W771	Glassblowing	(CAH25) design, and creative and performing arts
W780	Paper crafts	(CAH25) design, and creative and performing arts
W781	Bookbinding	(CAH25) design, and creative and performing arts
W782	Origami	(CAH25) design, and creative and performing arts
W790	Crafts not elsewhere classified	(CAH25) design, and creative and performing arts
<b>Design</b>		
W200	Design studies	(CAH25) design, and creative and performing arts
W210	Graphic design	(CAH25) design, and creative and performing arts
W211	Typography	(CAH25) design, and creative and performing arts
W212	Multimedia design	(CAH25) design, and creative and performing arts
W213	Visual communication	(CAH25) design, and creative and performing arts
W230	Clothing/fashion design	(CAH25) design, and creative and performing arts
W231	Textile design	(CAH25) design, and creative and performing arts
W240	Industrial/product design	(CAH25) design, and creative and performing arts
W250	Interior design	(CAH25) design, and creative and performing arts
W260	Furniture design	(CAH25) design, and creative and performing arts
W270	Ceramics design	(CAH25) design, and creative and performing arts
W280	Interactive and electronic design	(CAH25) design, and creative and performing arts
J920	Ergonomics	(CAH25) design, and creative and performing arts
W290	Design studies not elsewhere classified	(CAH25) design, and creative and performing arts
<b>Film, TV, radio and photography</b>		
P300	Media studies	(CAH24) media, journalism and communications
P301	Television studies	(CAH24) media, journalism and communications
P302	Radio studies	(CAH24) media, journalism and communications
P303	Film studies	(CAH24) media, journalism and communications
P304	Electronic media studies	(CAH24) media, journalism and communications

Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
P305	Paper-based media studies	(CAH24) media, journalism and communications
P310	Media production	(CAH24) media, journalism and communications
P311	Television production	(CAH24) media, journalism and communications
P312	Radio production	(CAH24) media, journalism and communications
P313	Film production	(CAH24) media, journalism and communications
P390	Media studies not elsewhere classified	(CAH24) media, journalism and communications
W600	Cinematics and photography	(CAH25) design, and creative and performing arts
W610	Moving image techniques	(CAH25) design, and creative and performing arts
W611	Directing motion pictures	(CAH25) design, and creative and performing arts
W612	Producing motion pictures	(CAH25) design, and creative and performing arts
W613	Film and sound recording	(CAH25) design, and creative and performing arts
W614	Visual and audio effects	(CAH25) design, and creative and performing arts
W615	Animation techniques	(CAH25) design, and creative and performing arts
W620	Cinematography	(CAH25) design, and creative and performing arts
W630	History of cinematics and photography	(CAH20) historical, philosophical and religious studies
W631	History of cinematics	(CAH20) historical, philosophical and religious studies
W632	History of photography	(CAH20) historical, philosophical and religious studies
W640	Photography	(CAH25) design, and creative and performing arts
W690	Cinematics and photography not elsewhere classified	(CAH25) design, and creative and performing arts
<b>IT and software</b>		
I150	Multimedia computing science	(CAH11) computing
I300	Software engineering	(CAH11) computing
I310	Software design	(CAH11) computing
I600	Games	(CAH11) computing
I610	Computer games programming	(CAH11) computing
I620	Computer games design	(CAH11) computing
I630	Computer games graphics	(CAH11) computing
I700	Computer generated visual and audio effects	(CAH11) computing
I710	Computer generated imagery	(CAH11) computing
<b>Museums, galleries and libraries</b>		
P120	Librarianship	(CAH24) media, journalism and communications
P121	Library studies	(CAH24) media, journalism and communications
P130	Curatorial studies	(CAH24) media, journalism and communications
P131	Museum studies	(CAH24) media, journalism and communications
P132	Archive studies	(CAH24) media, journalism and communications
P190	Information services not elsewhere classified	(CAH24) media, journalism and communications

Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
<b>Music, performing and visual art</b>		
J931	Music recording	(CAH10) engineering and technology
J950	Musical instrument technology	(CAH10) engineering and technology
W100	Fine art	(CAH25) design, and creative and performing arts
W110	Drawing	(CAH25) design, and creative and performing arts
W120	Painting	(CAH25) design, and creative and performing arts
W130	Sculpture	(CAH25) design, and creative and performing arts
W140	Printmaking	(CAH25) design, and creative and performing arts
W150	Calligraphy	(CAH25) design, and creative and performing arts
W160	Fine art conservation	(CAH20) historical, philosophical and religious studies
W190	Fine art not elsewhere classified	(CAH25) design, and creative and performing arts
W220	Illustration	(CAH25) design, and creative and performing arts
W300	Music	(CAH25) design, and creative and performing arts
W310	Musicianship/performance studies	(CAH25) design, and creative and performing arts
W330	History of music	(CAH20) historical, philosophical and religious studies
W340	Types of music	(CAH25) design, and creative and performing arts
W350	Musicology	(CAH25) design, and creative and performing arts
W360	Musical instrument history	(CAH25) design, and creative and performing arts
W390	Music not elsewhere classified	(CAH25) design, and creative and performing arts
W400	Drama	(CAH25) design, and creative and performing arts
W410	Acting	(CAH25) design, and creative and performing arts
W420	Directing for theatre	(CAH25) design, and creative and performing arts
W430	Producing for theatre	(CAH25) design, and creative and performing arts
W440	Theatre studies	(CAH25) design, and creative and performing arts
W450	Stage management	(CAH25) design, and creative and performing arts
W451	Theatrical wardrobe design	(CAH25) design, and creative and performing arts
W452	Theatrical make-up	(CAH25) design, and creative and performing arts
W460	Theatre design	(CAH25) design, and creative and performing arts
W461	Stage design	(CAH25) design, and creative and performing arts
W490	Drama not elsewhere classified	(CAH25) design, and creative and performing arts
W500	Dance	(CAH25) design, and creative and performing arts
W510	Choreography	(CAH25) design, and creative and performing arts
W520	Body awareness	(CAH25) design, and creative and performing arts
W530	History of dance	(CAH20) historical, philosophical and religious studies

Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
W540	Types of dance	(CAH25) design, and creative and performing arts
W590	Dance not elsewhere classified	(CAH25) design, and creative and performing arts
W311	Instrumental or vocal performance	(CAH25) design, and creative and performing arts
W312	Musical theatre	(CAH25) design, and creative and performing arts
W313	Conducting	(CAH25) design, and creative and performing arts
W314	Jazz performance	(CAH25) design, and creative and performing arts
W315	Popular music performance	(CAH25) design, and creative and performing arts
W316	Electronic/electro-acoustic music performance	(CAH25) design, and creative and performing arts
W317	Historical performance practice	(CAH25) design, and creative and performing arts
W320	Music education/teaching	(CAH25) design, and creative and performing arts
W341	Popular music	(CAH25) design, and creative and performing arts
W342	Film music/screen music	(CAH25) design, and creative and performing arts
W343	Jazz	(CAH25) design, and creative and performing arts
W344	Folk music	(CAH25) design, and creative and performing arts
W345	Opera	(CAH25) design, and creative and performing arts
W346	Sacred music	(CAH25) design, and creative and performing arts
W351	Ethnomusicology/world music	(CAH25) design, and creative and performing arts
W352	Community music	(CAH25) design, and creative and performing arts
W353	Music and gender	(CAH25) design, and creative and performing arts
W354	Philosophy, aesthetics and criticism of music	(CAH25) design, and creative and performing arts
W355	Music psychology	(CAH25) design, and creative and performing arts
W356	Music theory and analysis	(CAH25) design, and creative and performing arts
W357	Sociology of music	(CAH15) social sciences
W370	Music technology and industry	(CAH25) design, and creative and performing arts
W371	Sound design/commercial recording	(CAH25) design, and creative and performing arts
W372	Creative music technology	(CAH25) design, and creative and performing arts
W373	Electro-acoustic studies	(CAH25) design, and creative and performing arts
W374	Music production	(CAH25) design, and creative and performing arts
W375	Music management/music industry management/arts management	(CAH25) design, and creative and performing arts
W376	Music marketing	(CAH17) business and management
W380	Composition	(CAH25) design, and creative and performing arts
W381	Electracoustic composition/acousmatic composition	(CAH25) design, and creative and performing arts



Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
W382	Sonic arts	(CAH25) design, and creative and performing arts
W383	Electronic music	(CAH25) design, and creative and performing arts
W384	Applied music/musicianship	(CAH25) design, and creative and performing arts
W385	Commercial music composition	(CAH25) design, and creative and performing arts
W386	Multimedia music composition	(CAH25) design, and creative and performing arts
W387	Jazz composition	(CAH25) design, and creative and performing arts
W388	Popular music composition	(CAH25) design, and creative and performing arts
W441	Theatre and professional practice	(CAH25) design, and creative and performing arts
W442	Contemporary theatre	(CAH25) design, and creative and performing arts
W443	Technical arts and special effects for theatre	(CAH25) design, and creative and performing arts
W453	Technical stage management	(CAH25) design, and creative and performing arts
W470	Performance and live arts	(CAH25) design, and creative and performing arts
W471	European/world theatre arts	(CAH25) design, and creative and performing arts
W472	Circus arts	(CAH25) design, and creative and performing arts
W473	Community theatre	(CAH25) design, and creative and performing arts
W531	Dance and culture	(CAH25) design, and creative and performing arts
W532	Community dance	(CAH25) design, and creative and performing arts
W541	Ballet	(CAH25) design, and creative and performing arts
W542	Dance theatre	(CAH25) design, and creative and performing arts
W543	Contemporary dance	(CAH25) design, and creative and performing arts
W544	Jazz dance	(CAH25) design, and creative and performing arts
W550	Dance performance	(CAH25) design, and creative and performing arts
<b>Publishing</b>		
P100	Information services	(CAH24) media, journalism and communications
P110	Information management	(CAH24) media, journalism and communications
P400	Publishing	(CAH24) media, journalism and communications
P410	Electronic publishing	(CAH24) media, journalism and communications
P411	Publishing on audio/video tape	(CAH24) media, journalism and communications
P412	Publishing on CD-ROM	(CAH24) media, journalism and communications
P413	Publishing via the World Wide Web	(CAH24) media, journalism and communications
P420	Multimedia publishing	(CAH24) media, journalism and communications
P430	Interactive publishing	(CAH24) media, journalism and communications
P500	Journalism	(CAH24) media, journalism and communications

Table 15: Creative Subject definition (continued)

JACS 3 Code	JACS 3 Name	CAH group
P510	Factual reporting	(CAH24) media, journalism and communications
P590	Journalism not elsewhere classified	(CAH24) media, journalism and communications
W800	Imaginative writing	(CAH19) language and area studies
W810	Scriptwriting	(CAH19) language and area studies
W820	Poetry writing	(CAH19) language and area studies
W830	Prose writing	(CAH19) language and area studies
W890	Imaginative writing not elsewhere classified	(CAH19) language and area studies
P490	Publishing not elsewhere classified	(CAH24) media, journalism and communications
<b>Broad creative subject</b>		
P900	Others in mass communications and documentation	(CAH24) media, journalism and communications
P990	Mass communications and documentation not elsewhere classified	(CAH24) media, journalism and communications
W900	Others in creative arts and design	(CAH25) design, and creative and performing arts
W990	Creative arts and design not elsewhere classified	(CAH25) design, and creative and performing arts
W000	Creative arts and design	(CAH25) design, and creative and performing arts
P000	Mass communications and documentation	(CAH24) media, journalism and communications

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