

Addressing Inequality? The Provision of Careers Guidance in Welsh Schools

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Abstract

This study examines the factors that influence the likelihood of receiving careers information, advice and guidance in Welsh schools. We analyse data on 270,437 pupils in academic years 10–11 between years 2012-2015 from the Welsh National Pupil Database (NPD) and the anonymised client information held by Careers Wales. We investigate the incidence and nature of careers guidance received by children in Welsh schools and examine how this is influenced by pupils' demographic and academic characteristics. The results of multivariate logistic regression highlight that pupils who are eligible for free school meals (eFSM), have special education needs (SEN), lower academic attainment and high absenteeism are more likely to get careers-related support in schools. Amidst concerns about the intergenerational transmission of socio-economic disadvantage and of the potential inequity in the provision and take-up of careers guidance within schools, this study provides evidence of the effectiveness of Careers Wales in targeting those with the greatest need.

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1. Introduction

In the UK, the transition from learning to work for young people is becoming increasingly complex and young individuals face a daunting array of challenges. First, they have to navigate a complex range of educational and vocational choices as they progress towards their working lives (Dorsett and Lucchino 2015; Hutchinson and Kettlewell 2015). Furthermore, the period of transition from learning to work is increasing and once these individuals enter the workplace, they are faced with a dynamic labour market where their capacity to adapt and make appropriate career changes remains critical (Bimrose and Brown 2015; Ohme and Zacher 2015). Given the complexity of the transition between school to work, school to post-compulsory education, and the demands of contemporary labour market, the provision of adequate and timely careers information, advice and guidance (henceforth careers guidance) plays a critical role. Careers guidance is deemed a significant resource that not only nurtures the foundations of a healthy labour market, but also supports individuals, employers and society at large.

Evidence shows that the value of careers guidance is more beneficial if individuals start receiving this support early in their educational life (Morgan et al. 2007). It has been argued that providing careers guidance in schools can help young people make an effective transition from education to work and to build skills necessary for managing their participation in the labour and learning markets (Andrews and Hooley 2017). Careers guidance in schools has also been found to have significant benefits in terms of engaging young people in learning, retaining them in school and helping them to achieve good academic qualifications (Hooley et al. 2014, p.153). In particular, it has been highlighted that by helping young people to develop their career management competencies and their roles as learners and workers earlier on, careers guidance can help reduce the number of young people who fall outside of the education, training or employment system and from becoming 'NEETS' - Not in Education, Employment or Training (NEET). Participation in careers guidance at school has even been associated with higher subsequent earnings (Kashefpakdel and Percy, 2016).

Within the UK, there are concerns that the provision of career services is not sufficient to address the needs of young people. In 2010, the UK government withdrew funding for the

Connexions Network which had provided a dedicated careers guidance service for young people. Within England, the 2011 Education Act gave schools and teachers the responsibility to arrange independent careers guidance for their students. They have been supported in this role by the establishment of the Careers & Enterprise Company (CEC) in 2014. However, there is concern that this advisory body will be unable to fill the gap left by Connexions and that there will be a decline in the level of provision of careers guidance in schools (see Moote and Archer, 2018). In 2017 the UK government published its new careers strategy¹, which centres on the achievement by schools of 8 Gatsby benchmarks that define excellence with respect to careers guidance. CEC will continue to provide external support to schools, who by September 2018 will be expected to nominate a Careers Leader who will be responsible for the school's Careers Programme and to deliver on the benchmarks. The effectiveness of these programmes will continue to be inspected by Ofsted and measured with respect to school level pupil destination data. Since 2016, additional resource has been made available to 12 Opportunity Areas characterised by low levels of social mobility. The funds were established to support additional interventions targeted at those within Year Groups 7-13 who are at an increased risk of becoming NEET, including those with SEN and disabilities. The new Careers Strategy also highlights the development of additional resources improve careers guidance for those with SEN and disabilities.

Within Wales, Careers Wales is responsible for providing an independent and impartial careers information, advice and guidance service. Careers Wales is a wholly owned subsidiary of the Welsh Government. Careers Wales was established in 2012 through the merger of regional companies that also operated through the Careers Wales brand. The purpose of Careers Wales is to support the Welsh Government's strategic objectives of ensuring the sustained progression of youth through education and into employment or further education/training, and reducing the number of young people who are outside the education, training or employment system. Careers Wales has incurred significant reductions in its core budget over the last decade, from £42m in 2010/11 to £18m in 2016/17. Careers Wales works to a remit set by the Minister for Education and Skills and support the Welsh Government's

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664319/Careers_strategy.pdf

strategic objectives as identified in the Programme for Government. Since its establishment, remit letters issued to Careers Wales by Welsh Government have emphasised the prioritisation of support to young people with SEN statements and those who are in greatest need of careers guidance, including those at risk of becoming disengaged or NEET². This need is assessed during Key Stage 4, when all Year 10 pupils are provided with the opportunity to complete the 'Career Check' assessment tool.

Previous research on the provision and take-up of careers guidance within schools has generally been based upon voluntary surveys, such as the studies of Scottish school leavers undertaken by Furlong (2006) or the educational choices of 13/14 year olds within England undertaken by Haynes et al (2013) and the national survey of 13,000 Year 11 students in England undertaken by Moote and Archer (2016). This paper utilises population level education data for Wales linked to administrative data collected by Careers Wales to provide a comprehensive 'national level' examination of the receipt of careers guidance in Wales. Our focus is upon pupils in academic years 10–11, also referred to as Key Stage 4 and our analysis explores which pupils are more or less likely to receive careers advice within Welsh schools. Specifically, the study examines if demographic and educational factors are associated with the probability of receiving careers guidance within schools regarding options in education and work. In doing so, this study highlights if careers services are accessible to those pupils with the greatest need. The remainder of this paper is structured as follows. Section two reviews the literature on careers guidance and labour market outcomes, and discusses the significance of careers guidance within schools. The third section describes the data sets used in the study. The fourth section provides a descriptive analysis of the data. Section five describes the methodological approach of the study and presents the results of the multivariate logistic regression and section six concludes the paper.

2. Careers guidance and labour market outcomes – the context

In recent years, the importance of careers guidance programmes in supporting labour market outcomes are increasingly being acknowledged. This has been mainly linked to the changing economic landscape, specifically after the 1980s. It has been argued that the labour market

² http://s3-eu-west-1.amazonaws.com/static.live.careerswales.net/AnnualReport1415_full_FINAL.pdf

has become increasingly individualised and young individuals today are subject to varied kinds of uncertainties (Giddens 1991). Qualifications have become increasingly important for obtaining employment and if young people remain in post-compulsory education, they are less likely to become unemployed (Bradley and Lenton 2007). Young people also increasingly have to commute away from their home regions to find work (Haynes et al. 2013). It is believed that meaningful information on educational and occupational avenues will stimulate the desire of young people to remain active in post-compulsory education and training and will enable potential labour market entrants to make well-informed learning and career choices. Careers guidance in this respect is seen to be a significant tool that can enhance careers aspirations of youth, which are associated to their ultimate occupational attainment (Tangri and Jenkins 1986).

Many studies have provided conceptual and empirical support for economic benefits of career guidance and have identified it as a vital ingredient of fulfilling the needs of human development (e.g., Donohue and Patton 1998; Bimrose and Wilden 1994; Herr 1992). Specifically, Krumboltz (1996) argued that 'the economic welfare of the nation depends on its citizens learning career relevant skills and characteristics and learning to adapt to a constantly changing work environment'. The Lisbon agenda for growth and jobs also infers a strong support for introducing career guidance interventions by endorsing that people should understand how labour markets operate and have the necessary information, skills, and abilities to effectively manage labour market changes for meaningful participation in the labour market (Cedefop 2008). This shows that interventions that promote labour market intelligence and increase the knowledge pool of existing and aspiring labour market participants are of potential importance for improving both individual life-chances and overall labour market conditions.

Although career management interventions have largely been seen to have a direct economic impact on individuals through improving their employability, broader benefits of career management skills have also been suggested. For instance, previous research has emphasised the contribution of career management in reducing the costs associated with ill-health and criminal justice by boosting an individual's likelihood of getting better employment, higher income levels and overall quality of life (Mayston 2002 cited in Bridgstock 2009). Similarly,

Hughes et al. (2002) in their review of more than 40 studies, investigating the economic effects of career education provision, highlighted that careers-related information achieved moderate-to-high level economic benefits through improved student course choice, course retention and learning outcomes and in the wider population through lower unemployment rates, reduced job-search times, lower worker turnover rates and improved productivity (Bridgstock, 2009, p. 38). Evidence has also been provided which shows that career guidance increases occupational knowledge and self-esteem of individuals (Otte and Sharpe 1979), improves their career maturity (Hamdani 1977), and helps them take a pro-active approach about vocational issues (Cherry and Gear 1987). Similarly, exposure to careers education is associated with an increase in knowledge on various aspects, such as the world of work, non-family information sources, planning, and job interview preparations (Chamberlain 1982). Career guidance interventions have been demonstrated to play a significant role in increasing knowledge of self, improve confidence and direction of career goals, and help shape more realistic expectations about careers (Donohue and Patton 1998).

In line with the changing educational and career landscape, the remit and role of careers guidance for youth is also undergoing a rapid change to align with the evolving expectations of young people. The remit of careers guidance has been broadened from performing its traditional role of identifying the aptitude of learners in education to encompass a variety of functions which support individuals in making informed careers choices, achieving resilience to handle change in individuals' careers more effectively and raising the aspirations and awareness of learners (Watts and Kidd 2000). The role of careers guidance has been highlighted for qualitatively distinct stages in a young individual's life, with each stage being unique and separate. The main premise being that the guidance is widely accessible, adequate, and timely.

The significance of the provision of careers guidance in schools can be linked to John Dewey's (1963) seminal work on cognitive development movement in which he emphasised the school's role in promoting students' cognitive, personal, social, and moral development. However, its rising importance in the UK is primarily linked to the economic argument that the United Kingdom as a whole needs individuals to make well-informed career choices throughout their lives. Schools provide the basic platform that ensures high-quality education

for all students to build a skilled and engaged future generations of citizens that can keep the economy, communities, and families healthy and productive. The economic benefits of introducing careers guidance from an early stage pivot on the arguments of encouraging and retaining pupils in post-compulsory education to achieve better performance in the labour market (Andrews and Hooley 2017; Hooley et al. 2014). Careers guidance has been recognised as an enabling intervention that mitigates the challenges of student transition from school to post-compulsory education by minimising the influence of factors that are known to affect this transition, choosing appropriate courses, and succeeding as higher education learners.

A more encompassing view providing support for the provision of careers guidance in schools suggests that careers advice is often a key source of information for young individuals and their parents, especially if they belong to families who have a history of unemployment or low-skilled employment and/or no experience of higher education (Haynes et al. 2013). It has been demonstrated that pupils from lower socio-economic status (SES) backgrounds are much less likely to participate in post-compulsory education (Chowdry et al. 2013), because lower SES pupils do not achieve as highly as higher SES pupils throughout education and, subsequently, do not have the same options available to them in terms of post-compulsory education and the labour market. Students' aspirations and careers choices are seen to be influenced by their experiences at home and school, exposure to employment, and encouragement from significant adults (Moote and Archer 2018; Archer et al. 2012). Parents of lower socio-economic status are generally less well informed and less likely to have the knowledge about particular career routes (Wikeley and Stables 1999). Those from more affluent backgrounds are seen to have higher career aspirations for their children (Bandura et al. 2001).

Parents' labour market status is seen to strongly predict children's economic well-being and there is significant cross-generational correlation in the jobs undertaken by parents and their off-spring (d'Addio 2007). Research also supports an association between parental worklessness (persistent and temporary) and children's abilities, aspirations, behaviour and attitudes towards education, and eventually their transition to employment. A notable contribution in this respect comes from Schoon et al.'s (2012) study which suggests that worklessness of parents contributes significantly to children's lack of cognitive abilities and

educational attainment at an early age (Key Stage 2 assessments), which continues through to GCSE (Key Stage 4 assessments) and then contributes to their increased risk of being NEET. Although the analysis acknowledges that the inter-linkages between these factors are complex, the study highlights that worklessness of parents is a major indirect contributor to poor educational and employment outcomes of children and that its effect increases if pupils simultaneously face other types of socio-economic disadvantage, such as low parental education and income. Schoon et al.'s (2012) research, thus, is instrumental in highlighting that the wider range of risks that children and their families face due to their dis-advantaged position in the society must be tackled effectively to avoid the likelihood of inter-generational transmission of socio-economic disadvantage causing poor outcomes.

Eligibility for Free School Meals (eFSM) is a prominent and frequently used indicator of socio-economic disadvantage, highlighting poverty and low family income, of children and young individuals. The literature documents that family income is an important factor associated with children's educational achievement (Hobbs and Vignoles 2010), specifically their progression to post-compulsory education, and employment. The provision of useful and timely careers advice is clearly one important way in which the dis-advantaged position of children and their families (e.g., the risk of remaining eFSM for longer) can be addressed. Careers guidance can therefore serve as the protective factor that might enable children and young people to overcome the initial scarring from their experiences at school and home, including aspects like parental worklessness. It can also function as the buffer against the risk of inter-generational transmission of worklessness for young people by improving their likelihood of making their transition from school to work and reducing their likelihood of being NEET. Specifically, the early provision of careers-related services within schools may play a key role in shaping the thinking about possible careers, challenging deeply embedded attitudes and perceptions and raising awareness of the diverse range of educational and employment opportunities (Haynes et al. 2013).

Schools are increasingly responsible for the provision of guidance to students in their career development and are expected to provide a range of activities to suit pupils' needs. Provision often includes a face-to-face service offering advice and guidance through individual interviews and/or through group sessions, which in turn may either be stand alone or

integrated into curriculum delivery. It has been vehemently proposed that careers guidance initiatives should be made 'available for all young people whilst giving particular priority to those who are at most risk of disadvantage' (Darling et al. 2000, p. 5). Research however suggests that not everyone has equal access to careers-related interventions. Recent evidence for England suggests that careers education in England is currently patterned in ways that may be working to promote inequalities relating to gender, ethnicity and social class. Based upon a large scale survey of Year 11 pupils in England, Moote and Archer (2016, 2018) reveal that females, ethnic minorities and students from disadvantaged social backgrounds (with very low levels of cultural capital) are less likely to report that they have received careers education. Earlier research has also provided similar evidence in relation to gender (Lufkin et al. 2007) and ethnicity (Brown et al. 1991; Watson and Stead 1990). In Scotland, unequal access to careers guidance has also been associated with learners' level of qualifications, attainment, and absenteeism, suggesting that those with the greatest need exhibit an increased risk of being unsupported within schools (Anderson et al. 2004).

3. Data

To explore whether pupils within schools in Wales receive careers-related services and if the services are accessible to those pupils who are most in need, we have drawn on two key sources of data: The Welsh National Pupil Database (NPD) and the Careers Wales data. The Welsh National Pupil Database (NPD) contains linked individual pupil records for all children in Wales in the state school system. We examine provision of careers guidance to pupils within Year Groups 10 and 11 of the National Curriculum, otherwise referred to as Key Stage 4 during the period 2012/13 to 2015/16. Our variables of key interest pertain to those which capture the relative socio-economic disadvantage of pupils; most notably educational attainment; absenteeism; free school meal eligibility and SEN. The GCSE attainment of learners is expressed in terms of their capped GCSE points which relates to the eight best GCSEs achieved by learners. For the purposes of our analysis, we allocate the GCSE results achieved by pupils during Year 11 to their Year 10 data so that we have a measure of educational attainment during the year prior to pupils taking their GCSEs. In terms of socio-economic characteristics, the NPD contains information as to whether or not pupils are eligible for free school meals (eFSM). Pupils are considered to be eFSM if their parents are in receipt of benefits that are primarily aimed at those out of work, such as Job Seekers

Allowance or Employment and Support Allowance³. Absenteeism is measured in terms of the proportion of half-sessions that pupils were in attendance during the academic year. Two additional measures are also derived. Persistent absenteeism measures whether or not a pupil was absent for more than 20% of half-day sessions during the school year. Unauthorised absenteeism captures whether or not pupils have explained and justifiable absences, i.e., permission to miss school has been granted from a teacher or other authorised representative of the school. Finally, SEN status of pupils records pupils' level of special education requirements. Pupils who are considered to have 'Statement' of needs are the ones who are eligible for the highest level of support from school, followed by the ones who have been identified to have either 'Action Plus' or 'Action' level requirements.

Careers Wales data provides information on various types of careers-related services and interactions delivered to clients living in Wales. The information is collected primarily to keep a record of the interventions provided by Careers Wales. The data mainly has information on various types of activities, interactions and services provided to clients, including the dates that these interactions took place. The interventions provided by Careers Wales can be grouped under eight broad activities including: interviews, employability support, keeping in touch, digital services, planning services delivery, careers planning documents, group sessions and 'other'⁴. Not all of the interventions provided by Careers Wales are pertinent to activities undertaken with children who are still within compulsory education. Interviews, group sessions and keeping in touch strategies are of most relevance to the activities undertaken by Careers Wales with Key Stage 4 pupils. Interviews represent two-way discussions between careers advisers and clients and may include diagnostic or mentoring interviews or college or sixth form pre-course guidance interviews. Group sessions represent interactions which record participation of more than one client at a given time, such as class level activities. Lastly, keeping in touch strategies are many and signify interactions in which contact is made with clients, either in person or electronically. These represent a log of (automated or manual) electronic communication with clients which ranges from attempted telephone contacts, email correspondence to and from clients, SMS to and from clients, and whether

³ <https://www.gov.uk/apply-free-school-meals>

⁴ See Annex 1 for details on interactions and services under each group.

clients attended a prescribed service. Within any academic years, pupils may have been in receipt of multiple interventions provided by Careers Wales. These detailed records are therefore aggregated up to the level of individuals so that they can be combined with pupil level data contained within the NPD. Linkage was undertaken on the basis of de-identified linkable personal identifier numbers derived for both data sets on the basis of name, gender, address and date of birth (see Jones et al. 2014 for details on the linkage process).

Table 1 gives an overview of the sample of pupils in the Welsh schools who are in years 10 and 11 during 2012-2105. It can be seen that, there are 270,437 pupils in our population with approximately 135, 000 pupils each in Year 10 and Year 11 over the period 2012-2015. Generally there are about 33-35 thousand pupils within each year group across maintained schools in Wales. Overall, approximately 69% of pupils in Welsh schools have received careers guidance services provided by Careers Wales. The majority of pupils (approximately 85%) received careers-related services when they were in Year 10; 52% of them benefited from careers guidance in Year 11. It is suspected that the lower proportion of pupils receiving Careers Advice in 2015 reflects reporting lags in the Careers Wales data. Nonetheless, the data are retained within our analysis. It must be noted that pupils may have also received careers education from other providers, including schools, Local Authorities services and Probation and Youth Offending Services in some cases.

Table 1 Overview of the achieved sample from the NPD and Careers Wales data

Year	Academic Years		Overall
	Year 10	Year 11	
2012			
Rate (%)	84.0	53.3	69.0
Population (N)	35,698	33,947	69,645
2013			
Rate (%)	87.9	50.4	68.9
Population (N)	34,228	35,183	69,411
2014			
Rate (%)	87.1	59.4	73.1
Population (N)	33,132	33,712	66,844
2015			
Rate (%)	79.9	46.5	63.1
Population (N)	32,004	32,533	64,537
Total Population (%)	84.8	52.4	68.6
Total Population (N)	135,062	135,375	270,437

N refers to the number of pupils (observations). Rate (%) refers to the rate of incidence.

4. Descriptive Analysis

Table 2 presents descriptive statistics related to the provision of careers guidance services in Welsh schools in relation to pupils' characteristics. The likelihood of receiving careers guidance for our sample of school pupils in Wales does not seem to be affected by the gender of pupils (69% for males compared to 68% for females overall). In terms of ethnicity, the likelihood of receiving careers guidance highlights a low uptake of careers services for Asian (78% and 46%) and Chinese (78% and 47%) students in both Years 10 and 11. Students who are eligible for Free School Meals are more likely to benefit from careers services in schools consistently in Years 10 and 11 (91% compared to 84% and 66% compared to 50% in years 10 and 11, respectively). The rate of receipt of careers guidance is also higher for students with special education needs. In Wales, support for young people with learning disabilities planning for post-school transition is required by local authorities under the National Service Framework for Children, Young People and Maternity Services in Wales and the Special Educational Needs (SEN) Code of Practice for Wales (Conlon 2014, p. 30). The remit of Careers Wales includes the provision of support for developing Transition Plans for those with SEN. The Special Needs team at Careers Wales undertakes to provide specialist Vocational Guidance Interviews (VGIs) for those with Special Educational Needs from Year 9 onwards. As a result, students who are identified to have higher levels of special education needs (i.e., statemented) consistently receive more of the careers-related services (95% in Year 10 and 84% in year 11) than students who have either relatively less SEN requirements (schools action or school action plus) or simply do not have any special education needs.

The incidence of receiving careers advice seems to be largely influenced by pupils' academic abilities and their absences from school. Our analysis suggests that students who achieve less than 200 points in their GCSEs are the ones most likely to receive careers services in schools (85% in Year 10 and 83% in Year 11). Contrarily, pupils with more than 400 GCSE points are the least likely to receive the services (50% in Year 10 and 39% in Year 11). However, it can be seen that being in receipt of careers guidance does not decline monotonically with increasing levels of educational attainment. In terms of pupils' absences, 82% of pupils who are persistently absent (absent for over 20% of half day sessions) benefit from the services of Careers Wales compared to 67% among those who are not persistently absent.

Table 2 Pupil characteristics and incidence of careers advice within schools

Pupil Characteristics	Academic Years		Total (%)
	Year 10	Year 11	
Gender (%)			
Male	85.3	53.5	69.4
Female	84.3	51.2	67.9
Free School Meal Eligibility (FSM)			
Eligible	91.0	66.3	79.0
Not Eligible	83.6	49.8	66.5
Ethnicity (%)			
White British	85.1	52.5	68.8
White Other	83.6	53.2	69.1
Asian	77.8	46.1	62.4
Black	80.0	53.5	66.9
Chinese	78.1	46.8	62.4
Mixed	83.4	52.1	68.0
Other	80.5	53.0	66.2
Special Education Needs (SEN) Provision (%)			
No Special Education Needs	82.4	47.8	65.0
School Action or Early Years Action	91.8	61.9	77.1
School Action Plus or Early Years Action Plus	93.7	70.7	82.6
Statemented	95.1	84.4	89.7
Medium of Study (%)			
Welsh	86.5	53.3	69.7
English	84.5	51.8	68.2
GCSE points (%)			
<200 points	85.3	83.2	83.3
200-300 points	78.1	68.9	68.9
300-400 points	83.3	49.6	49.6
>400 points	50.0	39.0	39.0
GCSE points missing	84.8	73.8	84.7
Absence (%)			
None	81.0	49.8	66.1
0-2.5%	81.0	44.4	63.5
2.5-5%	83.4	46.7	65.4
5-7.5%	84.6	49.4	66.8
7.5-10%	86.3	51.7	68.7
10-15%	88.2	56.6	71.8
15-20%	90.5	62.4	75.7
20-30%	92.7	68.5	79.6
30-40%	92.7	74.5	82.2
>40%	93.0	81.7	86.5
Persistent Absence (%)			
Not Persistently Absent	84.1	49.6	66.9
Persistently Absent	92.7	72.7	81.6
Un-authorised Absences (%)			
No unauthorised absences	83.7	49.2	67.2
Unauthorised absences	87.2	57.8	71.3
<i>Total</i>	<i>84.8</i>	<i>52.4</i>	<i>68.6</i>

We have also found variations in terms of the types of careers services received in relation to pupils' characteristics, and the associated descriptive statistics are provided in Table 3. Although the data comfortably highlights that the most common type of careers services received by pupils are interviews followed by group sessions, there is considerable variation in the rate of incidence for interviews and groups sessions according to pupils' characteristics. The results reveal a strong relationship between careers-related interviews and pupils' attainment and absenteeism and their eFSM and SEN status. Pupils with less than 200 GCSE points are most likely to receive interviews (64%), whereas pupils with more than 400 points are least likely to participate in interviews (15%). Similarly, students who have higher absences, are more likely to receive careers guidance interviews (63%, 66% and 69% for students exhibiting 20-30%, 30%-40% and >40% absences, respectively). The likelihood of receiving interviews increase if children are also considered to be eFSM (61%), and SEN requirements (60% to 68% in line with the level of SEN). By comparison, group work shows a weak relationship with pupils' educational or socio-economic characteristics which, arguably intuitively, suggest that pupils with 'the greatest needs' are no more likely than other pupils to participate in less targeted Group Sessions compared to other pupils. In sum, according to the analysis exploring the type of careers intervention used in line with pupils' characteristics, it can be inferred that more intensive interventions providing opportunities for one-to-one interactions (i.e., interviews and keeping in touch) are more focussed upon those who are in need.

Table 3 Type of Interventions received by pupils' characteristics

Pupil Characteristics	Interventions Received			
	Interviews	Keeping in Touch	Group Sessions	Misc.
Gender (%)				
Male	48.0	24.1	31.8	40.5
Female	46.4	21.6	33.0	36.5
Free School Meal Eligibility (FSM) (%)				
Eligible	61.4	35.1	30.2	55.1
Not Eligible	44.4	20.5	32.8	35.3
Ethnicity (%)				
White British	47.4	22.8	32.6	38.8
White Other	48.5	25.8	29.8	40.4
Asian	43.6	20.2	25.8	31.3
Black	42.5	26.5	33.0	34.1
Chinese	36.4	14.2	35.3	26.0
Mixed	47.3	25.4	30.2	39.5
Other	44.0	21.0	31.6	34.5
Special Education Needs (SEN) (%)				
No Special Education Needs	42.3	19.5	32.9	32.4
School Action or Early Years Action	60.4	33.9	33.1	50.2
School Action Plus or Early Years Action Plus	67.7	40.3	29.5	61.8
Statemented	67.5	25.5	25.6	83.3
Medium of Study (%)				
Welsh	45.1	18.5	39.3	36.3
English	47.5	23.7	31.7	38.2
GCSE points (%)				
<200 points	64.2	44.7	14.5	68.8
200-300 points	46.4	33.1	21.0	44.5
300-400 points	25.7	19.1	20.7	22.8
>400 points	15.0	7.9	22.1	12.1
GCSE points missing	65.2	25.2	44.1	50.3
Persistent Absence (%)				
0 %	42.6	19.8	32.7	34.0
0-2.5%	40.4	15.9	34.4	29.9
2.5-5%	42.6	18.0	34.6	32.5
5-7.5%	44.9	20.5	33.7	34.9
7.5-10%	48.4	23.5	32.6	38.2
10-15%	52.7	27.7	32.2	43.6
15-20%	57.8	35.1	29.7	49.7
20-30%	63.0	42.2	26.7	57.3
30-40%	65.5	47.2	22.4	62.5
>40%	69.4	54.2	18.5	71.4
Persistent Absence (%)				
Not Persistently Absent	45.2	20.8	33.5	35.3
Persistently Absent	64.9	45.8	24.0	61.4
Un-authorised Absences (%)				
No unauthorised absences	44.9	20.8	34.1	35.9
Unauthorised absences	51.5	45.8	29.3	43.6
<i>Total</i>	<i>47.2</i>	<i>22.9</i>	<i>32.4</i>	<i>38.6</i>

5. Multivariate Analysis

To examine if the likelihood of receiving careers guidance is influenced by pupils' characteristics, we ran a series of logistic regressions that model the probability of receiving careers guidance among our sample of school pupils. Models of the following general form are estimated:

$$CAREERS_{it} = \alpha + PC_{it}\beta + ABS_{it}\gamma + ATTAIN_{it}\lambda + SEN_{it}\chi + FSM_{it}\pi + \varepsilon_{it}$$

The dependent variable CAREERS identifies whether or not pupils receive careers guidance in schools. Our key explanatory variables measure pupils' characteristics – demographics (PC); academic ability (ATTAIN); the rate and nature of absenteeism (ABS); free school meal eligibility (FSM) and SEN status (SEN). Measures of statistical significance are retained in the presentation of results and are based upon robust standard errors that take account of repeated observations among pupils (i.e. data being available for both Year 10 and 11). Given previous research that raises concerns regarding the intergenerational transmission of worklessness, we pay particular attention to the effects of free school meal eligibility. Within our analysis, we estimate five regression models. The first model includes variables that account for pupils' demographic characteristics (gender, medium of study, ethnicity, LEAs), and eFSM – our baseline model. Subsequent models then assess the extent of change in the estimate of eFSM by introducing other key variables of interest. In the second model we added students' SEN status to our basic model. In the third model, we introduced measures reflecting students' extent and nature of absenteeism to the baseline model. In the fourth model, we added pupils' GCSE scores to the baseline model. Finally, we included all variables to assess their combined effects on the likelihood of receiving careers guidance in schools.

Table 4 reports multivariate estimates of the influence of pupils' characteristics derived from logistics regression as described above, expressed as odds ratios. Although based on population data, we retain measures of statistical significance (Z-values are presented in parentheses). The results from this model demonstrate that gender and medium of provision are relatively un-important predictors of being in receipt of the services of Careers Wales. Children of Black, Asian and Chinese origin are however estimated to be approximately 25%

less likely to receive the services of Careers Wales. Model 1 reveals that being eligible of FSM strongly influences the likelihood of receiving careers guidance in schools (odds ratio of 1.968***). Model 2 considers the change in the likelihood of receiving careers guidance in schools when pupils' SEN status is added to the analysis. The results confirm that pupils with higher levels of SEN exhibit an increased likelihood of receiving careers guidance compared to pupils who are not diagnosed as SEN. However, it remains the case that pupils with eFSM still have a higher likelihood of receiving careers guidance (odds ratio of 1.705***).

Model 3 demonstrates the likelihood of being in receipt of the services of Careers Wales is higher among those with higher levels of absenteeism, with the estimated odds ratio increasing to 3.429*** among those who were absent for more the 40% of the school year. Having an unauthorised absence is also estimated to have a separate and additional effect of increasing the likelihood of receiving Careers Guidance (odds ratio of 1.210***). After controlling for absenteeism, eFSM still continues to have a strong influence on the likelihood of receiving carers guidance (odds ratio of 1.601***). In Model 4, introducing controls for educational attainment indicate that those pupils who exhibit the highest levels of performance at GCSE are least likely to being in receipt of the services of Careers Wales. The inclusion of controls for educational attainment reduces the effect associated with eFSM to 1.593***. The analysis incorporating all variables associated with the likelihood of receiving careers guidance (Model 5) indicates that even after controlling for SEN, absenteeism and exam performance, those pupils who are eligible for FSM are still estimated to be more likely (odds ratio of 1.360***) to be in receipt of careers guidance. The effects of ethnicity were also are very much diminished when other controls are included, although Asian and Black children remain less likely to be in receipt of careers guidance. Other results (not presented) confirmed the reduced likelihood of children being in receipt of the services of Careers Wales during Year 11 compared to Year 10.

Table 4 Multivariate estimates of the provision of careers guidance in Welsh schools by pupils' characteristics

Pupil Characteristics	Model 1	Model 2	Model 3	Model 4	Model 5
Gender					
Male (ref)	-	-	-	-	-
Female	1.082 (8.660***)	0.988 (-1.290)	1.097 (9.950***)	0.989 (-1.190)	0.971 (**)
Medium of Study					
English (ref)	-	-	-	-	-
Welsh	0.984 (-1.040)	1.027 (1.730)	1.033 (2.040**)	1.049 (3.020***)	1.088 (5.240***)
Ethnicity					
White British (ref)	-	-	-	-	-
White - Other	0.993 (-0.200)	0.985 (-0.430)	0.972 (-0.760)	0.922 (-2.300**)	0.959 (-1.140)
Asian	0.737 (-8.750***)	0.772 (-7.350***)	0.803 (-6.170)	0.788 (-6.720***)	0.847 (-4.600***)
Black	0.764 (-4.620***)	0.792 (-3.970***)	0.867 (-2.410)	0.803 (-3.730***)	0.886 (-2.000**)
Chinese	0.755 (-2.560*)	0.825 (-1.740)	0.914 (-0.810)	0.879 (-1.140)	1.027 (0.230)
Mixed	0.955 (-1.400)	0.975 (-0.740)	0.990 (-0.290)	0.974 (-0.770)	1.018 (0.510)
Other	0.861 (-4.250)	0.892 (-3.230***)	0.912 (-2.560*)	0.887 (-3.360***)	0.944 (-1.560)
Free School Meals (FSM)					
Not Eligible for FSM (ref)	-	-	-	-	-
Eligible for FSM	1.968*** (49.900)	1.705*** (38.450)	1.601*** (32.680)	1.593*** (33.640)	1.360*** (20.930)
Special Education Needs (SEN)					
No SEN requirements (ref)	-	-	-	-	-
Action	-	1.844*** (39.870)	-	-	1.493*** (24.650)
Action Plus	-	2.595*** (45.000)	-	-	1.884*** (27.040)
Statement	-	6.438*** (43.810)	-	-	4.898*** (31.720)
Rate of Absences					
0 % (ref)	-	-	-	-	-
0-2.5%	-	-	0.861*** (-7.150)	-	0.959* (-1.970)
2.5-5%	-	-	0.934*** (-3.220)	-	1.020 (0.930)
5-7.5%	-	-	1.006 (0.280)	-	1.069** (2.890)
7.5-10%	-	-	1.091*** (3.620)	-	1.133*** (5.070)
10-15%	-	-	1.277*** (10.080)	-	1.264*** (9.410)
15-20%	-	-	1.548*** (14.840)	-	1.433*** (11.980)
20-30%	-	-	1.937*** (20.190)	-	1.630*** (14.650)
30-40%	-	-	2.434*** (18.270)	-	1.840*** (12.340)

>40%	-	-	3.429*** (23.410)	-	2.138*** (14.200)
Un-authorised Absences					
No unauthorised absences (ref)	-	-	-	-	-
Unauthorised absences			1.210*** (17.050)	-	1.147*** (12.060)
GCSE Points					
<200 points (ref)	-	-	-	-	-
200-300 points	-	-	-	0.544*** (-19.980)	0.680*** (-11.780)
300-400 points	-	-	-	0.344*** (-43.140)	0.506*** (-24.760)
>400 points	-	-	-	0.224*** (-61.260)	0.374*** (-35.660)
GCSE points not available	-	-	-	0.179*** (-65.070)	0.325*** (-37.840)
Pseudo R2	0.1341	0.1517	0.1478	0.1539	0.1669
Observations	266,971	266,971	258,612	266,971	258,612

Notes: Models also include controls for Local Education Authority, Year and Year Group. Z statistics reported in parenthesis. *, **, *** indicate significance at the 10%, 5% and 1% level respectively.

Finally, Table 5 examines whether pupils' characteristics influence the likelihood of them receiving different types of careers interventions in schools as derived from our full specification (model 5). The results indicate differences in the types of careers interventions received by students in some cases. Intuitively, the analysis indicates that pupil characteristics are stronger predictors of the likelihood of being in receipt of the services of Careers Wales for those interventions that provide one-to-one support (e.g., Interviews and Keeping in Touch with Clients) than interventions that are delivered to a group of children. For example, pupils' with eFSM are more likely to receive their guidance in interview sessions (odd ratio of 1.465**) and are more likely to be followed-up using keeping in touch strategies (odds ratio of 1.384***). However, eFSM status is not a predictor of pupils participating in Group Sessions. Similarly, both SEN requirements and GCSE attainment are also not found to be predictors of pupils participating in Group Sessions. The association between absenteeism and the likelihood of receiving a particular type of careers guidance however reveals arguably an obvious, but nonetheless important finding. In terms of Interviews and Keeping in Touch with clients, those pupils with higher levels of absenteeism are more likely to be in receipt of the services provided by Careers Wales. However, by virtue of their absence, these pupils are less likely to participate in Group Sessions. Pupils who have an unauthorised absence are also less likely to have participated in Group Work sessions.

Table 5 Multivariate estimates of the types of careers guidance by pupils' characteristics

Pupil Characteristics	Interviews Model 6	Keeping in Touch Model 7	Group Sessions Model 8
Free School Meals (FSM)			
Not Eligible for FSM (ref)	-	-	-
Eligible for FSM	1.465*** (29.460)	1.384*** (24.660)	0.968** (-2.470)
Special Education Needs (SEN)			
No SEN requirements (ref)	-	-	-
Action	1.769*** (39.650)	1.578*** (31.010)	1.040** (2.690)
Action Plus	2.188*** (39.690)	1.808*** (31.180)	0.939** (-3.160)
Statement	4.105*** (39.980)	1.397*** (10.560)	1.062 (1.870)
GCSE Points			
<200 points (ref)	-	-	-
200-300 points	0.667*** (-13.810)	0.707*** (11.160)	1.277*** (6.720)
300-400 points	0.509*** (-27.680)	0.599*** (20.200)	1.121*** (3.760)
>400 points	0.349*** (-42.460)	0.389*** (36.220)	1.088*** (2.830)
GCSE points not available	0.268*** (-45.350)	0.229*** (43.940)	1.174*** (4.970)
Rate of Absences			
0 % (ref)	-	-	-
0-2.5%	0.998 (-0.100)	0.816*** (-8.480)	1.084*** (3.920)
2.5-5%	1.074*** (3.430)	0.919*** (-3.530)	1.092*** (4.230)
5-7.5%	1.157*** (6.630)	1.038*** (1.480)	1.078*** (3.390)
7.5-10%	1.286*** (10.730)	1.215*** (7.330)	1.011 (0.460)
10-15%	1.464*** (16.270)	1.429*** (13.610)	1.011 (0.470)
15-20%	1.643*** (17.960)	1.880*** (21.320)	0.894*** (-3.970)
20-30%	1.871*** (20.950)	2.325*** (27.100)	0.776*** (-8.190)
30-40%	1.945*** (15.840)	2.584*** (22.960)	0.644*** (-9.640)
>40%	1.980*** (16.020)	3.018*** (26.560)	0.513*** (-13.860)
Un-authorised Absences			
No unauthorised absences (ref)	-	-	-
Unauthorised absences	1.152*** (13.130)	1.271*** (20.140)	0.954*** (-4.340)
Pseudo R2	0.1774	0.1096	0.1153
Observations	258,612	258,612	258,612

6. Concluding remarks

Recent survey evidence for England has revealed that less than two-thirds of Year 11 pupils received careers advice and that this support is not reaching those who are most in need (Archer and Moote, 2016). Specifically, girls, minority ethnic, working-class and lower-attaining students are all significantly less likely to report receiving careers education. Utilising the data from the Welsh National Pupil Database combined with the anonymised client information held by Careers Wales for years 2012-2015, this paper has sought to examine the provision of careers guidance in Welsh schools. Specifically, the paper has examined the incidence with which pupils in Years 10 and 11 (Key Stage 4) receive careers guidance and whether careers guidance is accessible to those pupils who are the most in need of such services.

The analysis of administrative data reveals that in Wales approximately 85% of pupils received some form of contact with the Careers Wales during Year 10, falling to just over half during Year 11. The final year of compulsory education may therefore not provide a 'complete' picture as to who is in receipt of careers guidance. In terms of equality of access to careers guidance, our analysis demonstrates that whilst the provision of careers guidance in Welsh schools by Careers Wales is not gendered, certain minority ethnic groups are less likely to benefit from these services. Thirdly, the analysis confirms empirically that Careers Wales is fulfilling its remit of providing increased levels of support to those with Special Educational Needs. Finally, in terms of supporting those pupils with the greatest needs, the research demonstrates that pupils who are eligible for free school meals (eFSM), have lower levels of academic attainment and higher levels of absenteeism are each more likely to be in receipt of support from Careers Wales.

There are limitations to the analysis. For example, the validity of eFSM measure as a proxy for pupils' socio-economic status is debated. Concerns are raised about the validity of this binary measure itself, and how it is used as a proxy for socio-economic disadvantage. Although eFSM pupils are almost exclusively from low-income families, not all pupils from low-income families are identified as being eFSM (Taylor 2018; Ilie et al. 2017). It must also be acknowledge that Careers Wales is not the only provider of careers guidance activities within schools and inequities could exist in the provision and take-up of careers services

provide by other suppliers. Amidst concerns about the intergenerational transmission of socio-economic disadvantage and of the potential inequity in the take-up of careers guidance interventions, this study demonstrates that, through its assessment tools, Careers Wales appears to have been effective in achieving its remit of prioritising the delivery of its services to those with the greatest need.

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ANNEX 1: Description of the broad typologies of interactions and services in the Careers Wales Data

Code/Typology	Category
Interviews	<ul style="list-style-type: none"> • Vocational Guidance Interview with Transitional Plan • Careers Assistant interview • Work Experience Pre-brief Interview • Mentoring Interview • Diagnostic Interview • One-to-one • Information and Advice Interview for Careers Wales Connect • Other Interview • W Ex Monitoring Interview • Vocational Guidance Interview with Transitional Plan • College or 6th form Pre-course Guidance Interviews • Review
Employability support	<ul style="list-style-type: none"> • Rickter Assessment • Psychometric Assessment • Job Clubs • CV Preparation • Mock Interview • Online Assessment
Keeping in touch	<ul style="list-style-type: none"> • Did Not Attend • Attempted contact • SMS to Client • Email To Client • SMS To Client
Digital Services	<ul style="list-style-type: none"> • Careers Wales Connect Enquiry • Learning and Careers Advice (LCA) Enquiry
Planning Service Delivery	<ul style="list-style-type: none"> • Service Required • Preferred Language Provision • Email Received From Client
Career Planning documents	<ul style="list-style-type: none"> • Learning Difficulties and/or Disabilities (LDD) Funding • Employment Assessment • Traineeship Referral Form • Learning and Skills Plan Revision • ReAct Action Plan • Moving Forward • Learning and Skills Plan • Things To Do
Group Sessions	<ul style="list-style-type: none"> • Education • Other • Post Education • Work Experience Database Session • College or 6th form Enrolment • Group Interaction
Stand-alone categories	LDD Transition
	Advocacy / Liaison
	Parent Guardian