Foreword

Welcome to the third edition of the SDS Collaborative PhD Programme Brochure. In here you’ll find details of all our students, the topics they’re researching, their academic supervisors and their SDS sponsors.

SDS established its PhD programme in partnership with the Scottish Graduate School of Social Science (SGSSS) to deepen our links with the academic community and bring fresh thinking to skills policy and delivery in Scotland. The programme continues to attract outstanding doctoral students who are producing new, rigorous research on important and enduring skills issues from a Scottish perspective.

In addition to their academic supervisors, each PhD student has an SDS sponsor who provides practical advice and access to resources to help them complete their PhD. SDS has also developed a comprehensive student engagement programme which, I am pleased to say, has been recognised by our academic partners as an innovative example of good practice. This provides a range of activities that facilitate policy impact, enabling effective knowledge exchange and ensuring that the insights our students produce are translated into lessons for skills policy and practice. This is of fundamental importance to the programme.

Outcomes are important. To date, the SDS sponsored programme has supported 24 PhD studentships. Six of these students have completed their PhDs, with a further four due to complete by summer 2020.

To date, all of our doctoral graduates have found good quality research related jobs as a result of participating in the collaborative PhD programme. To me, that is a fundamental success of the programme.

Alongside the PhD programme, SDS also provides PhD internship opportunities across the country. Students gain employability skills from working in a non-academic setting, while SDS can capitalise upon the intellectual resources of highly skilled doctoral students for focused pieces of work. This is another great example of the mutual benefits of our academic collaboration.

The academic community is a vital partner in helping SDS find out ‘what works’ in skills policy and in developing innovative solutions. I commend the PhD programme to you and hope you find the insights it generates interesting and informative.

Damien Yeates
CEO, Skills Development Scotland
What is the PhD Programme?

The SDS PhD programme is a partnership initiative between Skills Development Scotland (SDS), the Scottish Graduate School of Social Science (SGSSS) and the Economic and Social Research Council (ESRC). It was established to engage the academic community in Scotland to support policy-relevant skills research. The focus of the research is to examine key questions in skills policy, skills delivery and Careers Information, Advice and Guidance (CIAG). The programme will produce a new body of research aligned to the evolving skills agenda in Scotland. It will also help to develop a new group of researchers with an in-depth understanding of the unique Scottish skills landscape.

How does it work?

Up to four sponsored SDS PhD studentships are enrolled each year. SDS identifies important skills-related topics and works with SGSSS to invite PhD proposals from academic supervisors. SGSSS and SDS then hold a panel meeting to select the strongest proposals. Successful PhD proposals are co-funded by SDS and the ESRC.

SDS works closely with the host university, academic supervisors and the student to support successful completion of the PhD. Each PhD student has an SDS PhD Sponsor who links the student into SDS and the wider skills community. The SDS Sponsor also has an important role in promoting the PhD research to relevant SDS teams, ensuring that key findings from the research are embedded in the policy and practice of SDS.

Findings from the research are fed back to SDS and SGSSS.

Spotlight on our PhD Sponsors

SDS provides each student on the collaborative PhD Programme with dedicated support from an individual SDS PhD sponsor. Our PhD sponsors have a vital role in supporting students throughout their PhD journey, helping them to make sense of the policy world, to connect with key stakeholders and to ensure their research is disseminated across SDS and beyond. One of our ‘veteran’ sponsors, David Coyne, describes the role as follows:

SDS sponsors and students have a long-term relationship that changes over-time. There is never a dull moment being close to the unfolding of such important, in-depth research as a PhD. It’s quite a big investment for SDS staff, but there are mutual benefits. Sponsors learn about the newest ideas being generated around the PhD topic first hand and can extend their contacts into academic networks.

David sees the role as revolving around four core areas of support that sponsors provide to their students:

- **Advocacy**: sponsors can help the students get easier access to the people they need to talk to for their research. In particular, they can help to avoid unnecessary delays if students need specific information for their research.
- **Facilitating Networking and Contacts**: sponsors can introduce the student to other stakeholders that SDS works with. I would invite my student to conferences and other policy events that I thought would be of interest and introduce her to relevant people there, as well as facilitating contacts more generally.
- **Practical Advice on Fieldwork Methods**: Academic supervisors guide the student on more formal research methodology. However, students often struggle on the ground to get the fieldwork done. My student had to interview 50 young people so, working with her supervisor, I offered practical advice on how to approach the fieldwork, tapping into existing youth networks and contacts in the field.
- **Sounding Board**: Last but not least, sponsors are a sounding board for their students. Doing a PhD is very challenging, you have to grapple in a deep way with theoretical and conceptual issues during the research. Sponsors can help the student to remain focussed on real world problems and to not go down a rabbit hole. This means getting to know the PhD topic and thinking through what theories or concepts might have a practical relevance. So, it’s a two-way learning process.
Benefits of the PhD Programme

The SDS Collaborative PhD Programme has a number of benefits for SDS and its stakeholders:

- Increased awareness of the value of academic research within the skills policy community;
- New opportunities for doctoral candidates to develop their knowledge and understanding in a policy context;
- A new cadre of high quality academic researchers with a deep knowledge of the Scottish skills landscape and system;
- New opportunities for PhD students to develop their skills and expertise within a workplace setting through PhD internships;
- New investment in high quality skills research, providing a robust and rigorous approach to tackling key skills policy questions.

A Word from our Partners – The Scottish Graduate School of Social Science (SGSSS)

The Scottish Graduate School of Social Science is the UK’s largest facilitator of funding, training and support for doctoral students in social science. By combining the expertise of sixteen universities across Scotland, the school facilitates world-class PhD research.

Working in a Doctoral Training Partnership gives you a unique but often head-spinning perspective. We are proud to count 16 Scottish universities as our partners and have the opportunity to interact and engage with social science PhD students the length and breadth of the country. A vast array of talent!

That talent, and the contribution of our university partners in nurturing it is vital, given some of the challenges facing Higher Education and in particular, the PhD community. It’s all about more – more impact, more training, more teaching. It’s also about less – less jobs in academia, less funding opportunities, less time to do – well anything! And somewhere in the middle of this complex equilibrium is the continuing expectation that a PhD is funded for three years and should be completed in that timeframe. All universities are battling with how best to support their students to achieve what can feel like an impossible goal.

I write this because it reminds me how grateful we are at SGSSS to have partners such as SDS who have developed their programme with all these considerations in mind. The engagement programme, which runs in tandem with the sponsored projects, provides opportunities to learn, to present, to see the relevance of research to the real world, and to demonstrate impact. And in a world where time is precious, having such opportunities built into the PhD opportunity rather than having to find them elsewhere makes a big difference. Having a dedicated sponsor that knows your topic, who is there from day 1 and can introduce you to a valuable network gives you the confidence to really push yourself. And being part of a cohort facing similar challenges yet bringing the perspectives of different universities and backgrounds creates a platform for discussion and innovative thinking.

Finally, knowing that your research has a purpose also makes a big difference. Seeing outputs from funded research starting to appear in policy decisions inspires us at SGSSS to keep working to the mantra that social science research is an essential part of a healthy, vibrant society. I leave you with just a few examples, that SGSSS is aware of through working with SDS, of how the collaborative PhD Programme has helped to enrich the evidence base and inform skills policy in Scotland.

- The findings from one of the PhD topics (Career Management Skills and Social Networking, Dr John Mowbray) have been used by SDS Career Information Advice and Guidance (CIAG) to help them understand the role of social media in job search when developing the CPD for CIAG learning offer to develop and improve practice.
- Another graduate, Dr Lindsey Middleton, whose research looked at enhancing the capacity for workplace learning and innovation in Scotland, highlighted the importance of ‘information literacy’ in supporting workplace learning which is feeding into the development of new and innovative perspectives on work-based learning at SDS.
- Both the findings and the methodology of another SDS topic, looking at the statistical characteristics of graduate career journeys, were instrumental in supporting SDS’s approach to the use of large data sets for understanding careers pathways.

Diane Gill
Manager, Scottish Graduate School of Social Science
Meet Our Students

In this section of the brochure we have the great pleasure of introducing the cohort of PhD students who are currently taking part in the SDS Collaborative PhD Programme, including those who have just started their first-year Masters’ studies and those who are in the final stages of writing up their Thesis. The following section will introduce our ‘Alumni’ – those who have successfully completed a PhD as part of the programme and have already submitted their Thesis and/or have now formally been awarded their Doctorates.

We would like to take this opportunity to thank all of our Doctoral candidates and our Alumni for their hard-work, resilience and determination in facing the very challenging journey of undertaking a PhD, for doing this in collaboration with SDS and for sharing their stories with SDS and its stakeholders.

Cara Nethery

Labour market outcomes for ethnic minority people in Scotland: do school subject choices and university choice matter?

Academic Supervisors: Dr Marina Shapira & Dr Dave Griffiths
SDS Sponsor: Dr Emma Hollywood & Fergus McMillan

Cara is currently completing her Master of Science degree (MSc) in Applied Social Research and Social Statistics at the University of Stirling as part of the 1+3 SDS Studentship programme. Prior to this she graduated from the University of Stirling in 2014 with a BA (Hons) in Politics and Sociology.

Cara’s research will focus on the transitions and labour market outcomes of young people from ethnic minority backgrounds in Scotland. The research aims to provide a detailed analysis of the current trends in these transitions, exploring the choices young people make at different stages of secondary education and the determinants of these choices. It will look at how choices throughout secondary education can impact on pathways into higher education and the labour market. The research will take a mixed methods approach using data from the Scottish Longitudinal Study and data on the Transitions and Destinations of School Leavers to explore the relationships between ethnicity and social class. Data will also be sourced from UCAS and HESA to analyse how these choices can create pathways for future employment for these young people. Semi-structured interviews will also be held with a sample of young people from different ethnic minority backgrounds to better understand the reasonings behind these choices.

Work-based learning environments (WBLE) for fostering industry-relevant skills and optimal economic performance

Academic Supervisors: Dr Laura Muir & Professor Colin Smith
SDS Sponsor: David Coyne

John is currently completing a Master of Research degree (MRes) at the University of Edinburgh as part of a 1+3 PhD pathway. He currently holds a MSc in Management with Business Economics.

John’s research is looking at Work Based Learning Environments (WBLE), exploring the languages and frameworks currently practised by industry. An important focus will be on current provision and how WBLE’s can be transformed to maximise economic benefits for individuals, firms and society. The research will use a mixed methods approach, incorporating a wide-ranging industry survey and extended case studies. John hopes to build a set of tools that will inform decision makers on how to foster productive WBLE’s. Specific areas of interest include the impact of Industry 4.0, business maturity and communities of practice.

Career information literacy and decision-making behaviours of young people

Academic Supervisors: Professor Hazel Hall & Dr Peter Robertson
SDS Sponsor: Anthony Standing

Marina is currently undertaking a Masters by Research (MScR) in Science and Technology Studies at the University of Edinburgh as part of her 1+3 PhD. She also holds a BSc in Psychology and an MSc in Human Resource Management. Marina will commence her PhD studies in October 2020 at the Centre for Social Informatics at Edinburgh Napier University.

The purpose of this research will be to generate new knowledge on career development learning with specific reference to decision-making amongst young people in S2-S6 (aged 12-18) who are preparing for their lives beyond school education. It is anticipated that the findings will provide insight into the meaning and development of information literacy in the context of careers guidance and contribute to the design and delivery of enhanced careers services.
Entrepreneurialism in Work (EiW): Its forms, requisite skills and enabling organisational factors

**Academic Supervisors:** Dr Scott Hurrell & Dr Jillian Gordon  
**SDS Sponsor:** Marion Beattie

Katherine Stephen is currently an MRes Management student as part of her 1+3 PhD at the University of Glasgow. Katherine is delighted to continue her research and studies in Glasgow where she recently received the Management Dissertation Prize from the Adam Smith Business School and was awarded an MA (GcSc) in Business and Management in June 2019.

Katherine’s research aims to explore the varying meanings of entrepreneurialism in the workplace (EiW), and the skills and traits enabling this within different sectors of the economy (public, private and voluntary) and in different organisational settings (e.g. start-ups and existing companies) in a Scottish context. As EiW is becoming an important source of competitive advantage, carrying out this project to understand the facilitating factors of EiW is crucial. Her innovative project links concepts of organisational culture, organisation learning, and Human Resource Management to explore the skills and factors which enable EiW. The practical impact of this research will be far-reaching for organisations, across all sectors, informing them of the skills and enabling organisational factors which encourage and advance EiW including the production of ‘good practice’ guides, to benefit policymakers, practitioners and entrepreneurs across Scotland and beyond.

Meta-skills maturity for future workplaces

**Academic Supervisors:** Dr Laura Muir & Professor Hazel Hall  
**SDS Sponsor:** Lewis Gale

Prior to starting her PhD, Fanni completed her MRes, as part of her 1+3 studentship. Her MRes dissertation studied the effects of new technologies on the operational HR role in the retail sector.

Fanni’s PhD research will examine the potential effects of technological change on skills in Scotland. Her research has started with an in-depth review of the literature on technological change and forecasting models, and the conceptual and empirical relationship between skills and technology. By applying the findings from the technology literature to the Scottish labour market, the research will identify potential change areas in the Scottish economy which are driven by technological change.

It is expected that the research will produce two case studies that will examine the interaction of new technologies, tasks and skills, and explore the factors that influence organisations’ decisions on technology implementation. This will help to identify barriers to technology adaptation and areas of the labour market that need further skills development. Based on the findings, the thesis will discuss potential future labour market scenarios and offer some recommendations for skills policy development.

The effects of technological change on skills in Scotland

**Academic Supervisors:** Professor Ronald McQuaid & Dr Belgin Okay-Somerville  
**SDS Sponsor:** Liz Byrne

The primary purpose of the project is to develop tools and practices to ensure that the current and next generations of the Scottish workforce are cognitively prepared to adapt and manage their position within the future labour market, with its challenges of automation, socio-political change and multi-job careers.

How do employers engage with apprenticeships in Scotland following the introduction of the Apprenticeship Levy?

**Academic Supervisors:** Professor Melanie Simms & Professor Chris Warhurst  
**SDS Sponsor:** Alison McConnell & Graeme Hendry

Paul is a first year PhD student at the University of Glasgow having completed a Management MRes last year as part of the (1+3) PhD programme. He also holds an undergraduate degree in Sociology and Politics and an MSc in Human Resource Management.

Paul’s PhD will focus on how employers engage with apprenticeships and will attempt to broaden understanding of what factors motivate employers when they are considering recruiting new members of staff to apprenticeship roles. The study will specifically seek to evaluate the impact of the Apprenticeship Levy on employer behaviour and engagement, to ascertain if this has in any way altered the quantity of apprenticeships on offer; but also the quality of these positions. The findings of this project will inform future policy discussions around apprenticeships.

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Gaile Siusyte

Supporting the key influencers on young people’s career development

Academic Supervisors: Dr Dave Griffiths & Dr Marina Shapira
SDS Sponsor: Ken Edwards

Gaile is currently in the second year of her PhD after completing her MSc in Social Research and Social Statistics as part of her 1+3 studentship. Before joining the PhD programme, Gaile graduated with a BA (Hons) degree in Psychology and Sociology. She discovered the PhD Programme during her undergraduate degree and wanted to pursue this opportunity to expand her knowledge and skills further, while working on a topic that interested her.

Gaile was attracted to this PhD topic as it is closely related to her previous research interests, which include social stratification and inequality related to gender, education, class, access and social mobility. This studentship will involve quantitative analysis of secondary datasets (such as PISA, Millennium Cohort, and Understanding Society Studies), and primary interviews with young people and the identified ‘key influencers’.

Louise McAulay

Overcoming barriers to labour market entry amongst people with disabilities and long-term health conditions and their unpaid carers

Academic Supervisors: Professor Paul Lambert & Professor Alasdair Rutherford
SDS Sponsor: Karen Kerr

Louise is currently in the second year of her PhD. Prior to her PhD, she worked as an Evaluation and Research Graduate Intern for Skills Development Scotland. Throughout the course of her PhD, Louise will examine the barriers to labour market participation for individuals who suffer from long-term health conditions/disabilities and those who provide their unpaid care. The research aims to achieve this through the analysis of three existing, high-quality large-scale social survey datasets, which include data on Scotland. The data analysis will explore how employment outcomes in Scotland are influenced by direct experience of disability/long-term health conditions and as an unpaid carer. This analysis will be compared against current policy initiatives to identify potential areas for improvement.

Petri Simonen

Young people’s key influences for transition into the world-of-work and the role of careers guidance policy in Scotland

Academic Supervisors: Dr Oscar Valiente & Dr Oscar Odena
SDS Sponsor: Andrea Glass

Petri started his PhD studies in October 2018 at the University of Glasgow. Prior to starting his PhD, he completed a MRes degree as part of the 1+3 studentship. Petri’s MRes dissertation examined the key influencers for young adults in choosing to start a Modern Apprenticeship. This topic is being examined further in his PhD research.

During the first year Petri was primarily focused on the literature review, but since autumn of 2019 the emphasis has been on refining the research design so that the data collection can start in early 2020. The study is examining not only who influences young adults’ choices, but also what form the influences take. Additionally, the study examines how the influencers in different roles affect each other – either directly or via the young adults – and how Scottish education policy measures affect the young adults’ choice to go into Modern Apprenticeship training.

Stephen Hughes

Work-Based Learning (WBL) for the fourth industrial revolution

Academic Supervisors: Dr Pauline Anderson & Professor Dora Scholarios
SDS Sponsor: Lewis Gale

Stephen has recently completed a MRes in Business and Management as part of his 1+3 SDS studentship. Prior to this he completed an undergraduate degree in Business and worked as a Modern Apprenticeship assessor and trainer.

Stephen’s doctoral research focuses on Work-Based Learning (WBL) for the Fourth Industrial Revolution. His research considers challenges and opportunities around developing a 4.0-ready skills system for an Industry 4.0-ready workforce, with a particular focus on digital health. His research considers the wider policy conditions required to make WBL an attractive and realistic proposition for all, particularly young people. The research questions will be refined based on the key lessons from the literature review.
Rachael Murphy

**Work readiness; understanding its complexity**

**Academic Supervisors:** Dr Scott Hurrell & Professor Dora Scholarios  
**SDS Sponsor:** Tety Dillin

Rachael is in her fourth year of her PhD, now studying part-time. Rachael’s research is looking at the complexity of work readiness; trying to better understand its meaning across a range of stakeholders and exploring enablers and barriers to its development. Rachael has completed her data collection, which involved interviews with young people, employers, and practitioners who support people into work. Her research explores:

- How work readiness is understood by different stakeholders;
- The roles of different stakeholders in developing work readiness; and
- The impact of contextual and environmental factors in developing work readiness.

The research is focused particularly on three groups of young people. The first two, care experienced and disabled young people, are included because of the lower employment rates seen in these groups. The third group is young people who have not been in higher education. There are natural cross-overs and intersections in these groups.

Gabi Lipan

**Mind the GAP: An investigation into the factors influencing student, academic and employer perceptions of Graduate Attributes**

**Academic Supervisors:** Dr Amy Irwin & Dr Emily Nordmann  
**SDS Sponsor:** Terry Dillon

Gabi is the SDS PhD Programme’s first 1+3 student. He completed his Masters degree at the University of Aberdeen and is now heading into the final year of his PhD. Gabi’s research examines the factors influencing student, academic and employer perceptions of graduate attributes. At present he is working on constructing a universal model of graduate attributes using perspectives from different stakeholders (e.g. academics, students, employers, policy-makers etc.). The categorisation of attributes in the model has already been validated by a diverse sample of stakeholders and the next step is to validate the categories’ and attributes’ descriptions. Gabi has completed a PhD Internship with SDS and is regularly in touch with SDS to present his findings and discuss their practical implications with key colleagues in the organisation.

Daniela Latina

**Models of collaborative working in employability**

**Academic Supervisors:** Dr Colin Lindsay & Professor Dennis Nickson  
**SDS Sponsor:** Dr Patrick Watt

Daniela is in the process of writing up her PhD and looks forward to submitting her thesis soon. Her research has explored the Scottish approach to collaborative working on employability and skills. Specifically, Daniela’s research has identified the strengths and limitations of the Scottish Employability Framework and Strategic Skills Pipeline models in aligning the work of partners in support of collaboration in the delivery of employability services. Looking at what works well and why, Daniela seeks to identify effective practice and critical success factors in the governance of employability collaborations, as well as how these can be measured.

Karen Gilmore

**The potential impact of Graduate Apprenticeships on intergenerational social mobility in Scotland**

**Academic Supervisors:** Professor Mike Danson & Professor Abigail Marks  
**SDS Sponsor:** Mairi Rule

Karen is in the final year of her PhD. Her research is exploring the potential impact of Graduate Apprenticeships on intergenerational social mobility in Scotland.

The focus of this year of study is finalising the collection of primary data from Graduate Apprentices and completing the writing up stage of the dissertation. Graduate Apprentices have been surveyed and interviewed to find out about their educational background and family backgrounds. They have also been asked about their motivation and aspirations. The results of this phase of the research have allowed the creation of a typology for Graduate Apprentices’ motivation to study.

For social equity and to ensure Scottish organisations draw from the widest pool of talent available, Graduate Apprenticeships need to appeal to individuals from a range of backgrounds ensuring they represent diversity of gender, race, ability and social class background. This study hopes to recommend how information about Graduate Apprenticeships should be provided and disseminated to build awareness among existing and potential stakeholders. It will determine how learners from different social classes, not all of whom may have a family background of degree level study, may be supported to ensure successful completion of this qualification.
Alana McGuire

The impact of big data on skills requirements

Academic Supervisors: Professor Alasdair Rutherford & Professor Paul Lambert
SDS Sponsor: Derek Hawthorne

Alana’s research looked at how Big Data affected labour market skills in Scotland, focusing on the tourism and life sciences sectors. She explored how important Big Data is becoming within organisations and how this may be changing employee job roles and skills demand. The challenges that employers may face when trying to bring Big Data into their organisation to help inform strategic decisions were also explored.

Alana used a mixed methods approach, including statistical analysis of large-scale surveys such as the Employer Skills Survey, the Labour Force Survey, and the British Cohort Study. As well as this, Alana conducted interviews with case study organisations in Scotland from the tourism and life sciences sectors.

Alana’s research identified the combination of underlying skills that are needed to be able to work with Big Data and the differences in required skill levels between sectors. It also explored sociological elements of Big Data skills including whether there is evidence of social, gender and ethnic inequalities in the possession of Big Data skills.

Alana used a statistical analysis and a mixed methods approach to investigate her topic, using multi-level stakeholder surveys on job quality and satisfaction, socially responsible practice measures and workplace innovation to inform interviews with organisations.

John Evans

Strategic actors and the apprenticeship system of skills formation

Academic Supervisors: Professor Dora Scholarios & Dr Pauline Anderson
SDS Sponsor: Terry Dillon

John is currently in the fourth year of his PhD, examining strategic actors within apprenticeship systems. His research focuses on the power relations between strategic actors and their repercussions for the shape and direction of apprenticeships.

The research approach adopts a comparative case study design looking at engineering apprenticeships in Scotland and England. John is currently in the writing up stage of his research, with a view to submitting in Spring 2020. He took up a full-time role as a Skills Planning Executive in SDS’s skills planning team in October 2018.

Meet our Alumni

This section profiles the following students who have successfully completed the collaborative PhD Programme and have either graduated or are waiting to graduate following a successful viva examination. Viva is short for “viva voce”, which means “by or with the living voice” and is where PhD candidates must give a verbal defence of their research thesis. Having successfully defended their thesis at a viva voce examination they have earned the title ‘Doctor’.

<table>
<thead>
<tr>
<th>Name</th>
<th>PhD Title</th>
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<tbody>
<tr>
<td>Dr Mark Egan</td>
<td>Childhood psychological predictors of unemployment: evidence from four cohort studies</td>
</tr>
<tr>
<td>Dr John Mowbray</td>
<td>The role of networking and social media tools during job search: an information behaviour perspective</td>
</tr>
<tr>
<td>Dr Bozena Wielgoszewska</td>
<td>Understanding university graduates’ social mobility trajectories: how does the route affect the outcome?</td>
</tr>
<tr>
<td>Dr Magdalena Gilek</td>
<td>The impact of job quality on mental health among young workers in the UK</td>
</tr>
<tr>
<td>Dr Kane Needham</td>
<td>The role of social networking sites in career management</td>
</tr>
<tr>
<td>Dr Lyndsey Middleton</td>
<td>Enhancing the capacity for workplace learning and innovation in Scotland</td>
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Mark’s research examined how certain non-cognitive skills (e.g. self-control) and different levels of mental health in early life predict future unemployment. His research used British and American data from four cohort studies. This examined how later unemployment was affected by childhood capacity for self-control. The research found that self-control, conscientiousness, and mental health all play a role in future unemployment and that children with poor self-control were more likely than more self-controlled children to experience unemployment during the UK’s 1980 recession and the US’s 2007 recession.

Mark graduated in 2017 and now works as an Advisor for the Behavioural Insights Team in London.

Bozena’s research examined the relationships between individual’s work histories and their social mobility trajectories, accounting for several additional characteristics. Her research used a sample of over 1000 graduates from the 1970 British Cohort Study to reconstruct their economic histories before deploying sequence analysis to derive a typology of graduates’ progression through social classes and a typology of career pathways. It was found that a relationship exists between career type and social mobility trajectories however additional factors (such as the social, geographical and individual attributes, internal migration trajectories and higher education) also play a role. Bozena’s research shows that career type is the missing link in contemporary social mobility research.

Bozena graduated in summer of 2019 and is now employed as a Research Fellow in the Centre for Longitudinal Studies at University College London.

Magdalena’s research examined job quality and mental health among young workers in four European countries. The study used large-scale European surveys to investigate how young workers evaluate the quality of their jobs in the context of the contemporary labour market. It considered the most significant factors that enable or challenge young adults in achieving or sustaining a high quality of working life, and the implications of job quality on their mental health.

Magdalena’s research makes an important contribution to understanding three key areas of job quality: its components, predicting factors, and outcomes. She produced new research findings on the impact of ‘job fit’ in terms of both skills and hours on young people’s mental health (measured by exhaustion, stress and fatigue) and on the mediating impact of perceived employability.

Magdalena recently passed her thesis defence with flying colours, requiring only very minor corrections. She is currently employed as a Senior Lecturer in Nottingham Business School at Nottingham Trent University.

John’s research investigated job search networking amongst 16-24-year-olds living in Scotland. John explored the role of social media platforms in job search through conducting interviews, focus groups and a survey. John’s research found that frequent networking both offline and on social media is associated with positive job search outcomes – especially with family networking and use of Facebook for job searching. However, contextual factors including demographic can influence this. Furthermore, it was found that young people face multiple barriers to networking and so do not always utilise their networks effectively. Through John’s engagement with SDS, John has used his findings to create a detailed set of recommendations for practitioners.

John graduated in the winter of 2018 and is employed as a Research Associate in Quantitative Network Analysis at the University of Glasgow.

Mark’s research examined how certain non-cognitive skills (e.g. self-control) and different levels of mental health in early life predict future unemployment. His research used British and American data from four cohort studies. This examined how later unemployment was affected by childhood capacity for self-control. The research found that self-control, conscientiousness, and mental health all play a role in future unemployment and that children with poor self-control were more likely than more self-controlled children to experience unemployment during the UK’s 1980 recession and the US’s 2007 recession.

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The role of social networking sites in career management

Kane’s PhD explores the role of Social Networking Sites (SNS) and the wider internet as a ‘revolutionary’ platform for career management (researching information, hearing about opportunities). He analysed large-scale survey data to map internet and SNS usage by demographic characteristics for a range of social groups and conducted in-depth case studies to look more closely at how productive use of the internet and SNS is for gaining employment. Kane’s study also considered the extent to which the internet can be used productively as a tool to enhance skills and opportunity for everyone, whether it mitigates traditional labour market barriers or creates a ‘second-level digital divide’ and uneven distribution of digital skills. In addition, Kane looked at the role of social capital (networking connections etc) and at the continuing relevance of informal methods of finding work, such as through a personal contact (using your social capital).

Kane’s initial findings suggest that internet job search and weak ties (bridging social capital) result in better career outcomes, however, inequality worsens as the internet’s importance increases suggesting that targeted interventions should be considered. Kane’s completed research will provide more detailed evidence to help inform targeted interventions by protected characteristics and occupational class.

Kane successfully defended his thesis with only minor corrections in December 2019. Kane is currently employed as a Researcher at Edinburgh Business School, Heriot-Watt University.

Exploring the development of innovative work behaviour of employees in multiple workplace contexts

Lyndsey is in the final stages of her PhD and is scheduled to graduate in Summer 2020 as she passed her viva with minor corrections in December 2019. Lyndsey currently works as an Assistant Statistician in the Scottish Government and has done so in the final year of her research, working full time whilst studying part time. Lyndsey’s research explored the informational, contextual and individual factors that enhance and inhibit the development of innovative work behaviour. A main output of her research was the development of a framework to explain how organisations can improve innovative work behaviour. The research draws upon aspects of information behaviour and use, organisational culture and strategy and at the continuing relevance of informal methods of finding work, such as through a personal contact (using your social capital).

Lyndsey’s study also considered the extent to which the internet can be used productively as a tool to enhance skills and opportunity for everyone, whether it mitigates traditional labour market barriers or creates a ‘second-level digital divide’ and uneven distribution of digital skills. In addition, Kane looked at the role of social capital (networking connections etc) and at the continuing relevance of informal methods of finding work, such as through a personal contact (using your social capital).

Lyndsey successfully defended her thesis with only minor corrections in December 2019.

Alana’s PhD Journey

Introduction

Alana is in the final year of her PhD. She returned to her studies in March last year following a period of maternity leave. Her beautiful baby girl Luna attended the last SDS PhD Networking event!

Prior to starting her PhD Alana completed a master’s degree in Public Policy Research at the University of Glasgow. Before that, she did a bachelor’s degree in Politics and English at the University of Strathclyde.

Alana’s PhD research looks at the impact of Big Data on skills requirements. It explores the extent to which a shortage of big data skills and data skills more generally is having an impact on employers in Scotland.

Alana was attracted to her PhD topic partly because it is a new and emerging field and partly because it involved quantitative research, which she enjoys (and is very good at!). In addition, Alana is very interested in researching the social stratification and inequality aspects of Information Technology/Big Data, which was a key requirement of the research. More generally, she wanted the opportunity to develop professionally and felt that she could make a valuable contribution to this particular PhD topic. Alana is well on the way to achieving this.

Outline of the Research

When one considers ‘big data’, the impact of this on the labour market may not be the first aspect of ‘big data’ to come to mind. However, several pieces of research suggest that the phenomena of ‘big data’ could have a significant impact on the demands for skills and social inequalities (E-Skills UK., 2013; Boyd and Crawford, 2012). Despite the growing interest in ‘big data’, very little empirical work exists. Alana’s research aims to fill this gap by examining how the emergence of ‘big data’ and the growth in ‘small data’ is changing the nature of employer demand for skills and the pace at which skills supply needs to change to enable employers to remain competitive. She also explores the barriers facing employers in responding to the need to develop skills in working with big and small data and considers whether there is evidence of social, gender, and ethnic inequalities in the distribution of big data skills and data skills more generally. In her analysis, Alana examines new approaches to measuring data and big data skills, including exploring the concept of ‘data readiness’. The research will identify which industries and occupations are most likely to be affected by big data skills requirements, consider the potential long-term impact on skills demand and supply and investigate what opportunities may be available to address these skills requirements.

The main aims of this research are threefold:

■ To examine the barriers which organisations may face when trying to make use of big data and data more generally.
■ To examine how prepared the labour market is for the predicted revolutions in ‘big data’.
■ To assess ‘big data’ skills in relation to social inequalities.

Research Questions

To address the above aims, the following research questions underpin Alana’s study:

1. What are the main barriers to using data in organisations in Scotland?
2. Which factors are associated with levels of ‘data readiness’?
3. Is there any evidence that Scotland is different to the rest of the UK when examining ‘data readiness’?
4. Is there evidence of social, gender, and ethnic inequalities in ‘big data’ skills?
**Methods**

Alana is using a mixed methods approach in her research, including statistical analysis of large-scale surveys such as the Labour Force Survey and Employer Skills Survey, and qualitative methods involving in-depth interviews with Scottish case study organisations, focussing in particular on the tourism and life sciences sectors.

The research design is a ‘partially mixed concurrent dominant status design’ (Leech and Onwuegbuzie, 2009), which involves the simultaneous collection of quantitative and qualitative data. In this study design, one method is given more emphasis than the other. In Alana’s research, quantitative data is given priority.

**Key Findings**

Findings from statistical analysis using the 1970 British Cohort Study suggests that there is an association between the social class of respondents and cognitive score. There is also an association between familial social class and the cognitive score of respondents, with the most disadvantaged groups scoring lower on cognitive tests than those in more advantaged social groups. The cognitive test used in this case contains many questions about distributions of data and measures of central tendency. Therefore, the findings from this analysis suggest that there may be a social class divide in data skills. When examining gender and ethnicity at an individual level, there is no strong evidence for differences in scores in the cognitive measure. Hence no differences can be inferred between men and women or between different ethnic groups from this analysis.

Additional statistical analysis using the Labour Force Survey and the Employer Skills Survey finds that the sector in which the establishment is based is important when considering how ready an establishment is to adapt to the demand of data skills.

Considering qualitative findings, within the two case study organisations, there appeared to be a general consensus that demand for data skills, and specifically big data skills, are growing in both the life sciences and tourism sectors. A number of themes have emerged from Alana’s research around the challenges and barriers involved in using data to its full potential. The main challenges highlighted were:

- Failure to see the value of data;
- Issues with skills and lack of training around data;
- Issues with time/resources;
- Problems with data storage; and
- Lack of trust in cloud storage, particularly with personal data.

Alana is now in the final stages of pulling together her data analysis and more recent findings. She’s in the latter stages of writing up and expects to submit her thesis by February 2020.

**References**


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**SDS PhD Internships**

SDS also works in partnership with (SGSSS) to offer internships opportunities to all PhD students within a SGSSS member institution in Scotland. Our PhD internships provide work-based experience outside of the students’ topic areas at a level appropriate to PhD research. They support the development of transferable skills, enhance employability and provide the student with experience of working in research in a non-academic setting.

To date we have provided seven PhD internships across a variety of SDS teams. SDS also has a current internship underway. This is based within our HR Team and will assess SDS’ fair work practices – what works well and where there is room for improvement.

<table>
<thead>
<tr>
<th>Name</th>
<th>Internship Title</th>
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<tbody>
<tr>
<td>Nilay Balkan</td>
<td>Neurodiversity and skills for the future – widening access to work-based learning</td>
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<tr>
<td>Heather Branigan</td>
<td>How do we measure the skills for the future?</td>
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<tr>
<td>Obafemi Olekanma</td>
<td>Structures and partnerships for work-based learning standards</td>
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<tr>
<td>Kane Needham</td>
<td>Equalities, poverty and participation in learning opportunities</td>
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<tr>
<td>Zinat Asif</td>
<td>The role of workplace innovation in supporting the Scottish Government’s PACE offer</td>
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<tr>
<td>Rebecca McCartan</td>
<td>Measuring the wider impacts of work based-learning</td>
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<tr>
<td>Gabi Lipan</td>
<td>Meta-skills development in high performing workplaces</td>
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A closer look at... Gabi’s PhD internship

Aberdeen University PhD candidate Gabi Lipan joined SDS in September 2019 to undertake an internship with our Service Design & Innovation team (SD&I).

Initially, Gabi’s internship involved looking at meta-skills in the context of High Performing Workplaces. This quickly evolved to include two more projects. The first was dedicated to improving the functionality and outsourcing the maintenance of the Open Innovation Platform, which was built to enable the SD&I team to collaborate with external partners. The second was a small project focused on identifying employer archetypes based on their potential for innovation. He had this to say about the internship opportunity:

“The original project was fascinating as it’s quite a new area that has implications for policy and services, but this novelty is also what made it difficult. There isn’t a lot of research on meta-skills and the field is just starting to pick up. The good part is that the team were very flexible and open to my ideas. That’s how the other two projects came to life.”

Gabi’s PhD research examines the factors influencing student, academic and employer perceptions of Graduate Attributes, which has relevance to the topic of meta-skills. He is approaching the final year of his PhD studies and has enjoyed the opportunity to do something a little bit different, outside of academia.

Regarding the benefits of the internship, Gabi said: “It’s been very valuable for me to use the skills I’ve learned during my university degrees in a different area to my PhD research. I also used my programming and web development skills when I worked with the graphic designers in the team to create templates for the Open Innovation Platform. It really felt that the team was keen to make good use of all my skills and the diversity of tasks was very motivating. Working on multiple projects at once and to tight deadlines also improved my employability skills.”

“The SD&I team at SDS were great to work with. They really welcomed me as part of the team and made me feel as if I belonged. They were friendly and supportive throughout, which made for a much more enjoyable and valuable internship experience.”

“It was an amazing opportunity and a great experience to have in a supportive and encouraging environment. I would definitely recommend it to any PhD student.”

Knowledge Exchange and Impact

Policy Relevance
A key strength of the SDS PhD programme is its strong links with policy and practice. The programme aims not only to support innovative research on skills and learning, but to feed key findings and insights from the research back into an applied setting. To achieve this, SDS supports a variety of opportunities for knowledge exchange, dissemination and dialogue around the policy implications of the research. These are described in our PhD Engagement Programme:

SDS PhD Engagement Programme
SDS provides a rich and varied PhD Engagement Programme for its students to help them disseminate their research and enable effective Knowledge Exchange (KE). The centrepiece of this programme is our PhD Sponsors who have a vital role in supporting students to connect with the policy world and in cascading learning from the research throughout SDS (see Spotlight on our Sponsors). Other elements of the engagement programme include:

Student Welcome Events
New students on the programme are invited to attend a welcome event which outlines how the collaborative PhD programme works and provides an opportunity for students to establish networking connections with SDS staff and other students.

“Presenting my masters work to SDS at the end of the year felt like an accomplishment; not only was this my first chance to show the team my research after getting to know them at several events through the year, but it gave me great practice in delivering my findings to a non-academic audience in a friendly, encouraging environment.”

Katherine Stephen
SDS PhD Student

KE Learning Events
Knowledge Exchange Learning Events allow students to have a dialogue with SDS staff at any time during their PhD journey and at different levels across the organisation. These events are initiated by SDS Sponsors and/or the student to explore emerging outputs from the PhD and get feedback on the relevance of the research for skills policy

MSC Events
PhD students who start at the MSc stage are invited to attend a meeting with SDS staff near the end of their MSc year to present their dissertation work and initial PhD study plans. This quote from one of our second-year students, Katherine Stephen eloquently captures the value of the MSc events for PhD students just starting out.

“Presenting my masters work to SDS at the end of the year felt like an accomplishment; not only was this my first chance to show the team my research after getting to know them at several events through the year, but it gave me great practice in delivering my findings to a non-academic audience in a friendly, encouraging environment.”

Katherine Stephen
SDS PhD Student
Policy Briefing Paper and Events
Policy briefing events are organised near the end of the student’s PhD and provide an opportunity for the student to meet with senior SDS staff to discuss the implications of their research for skills policy and practice. The students also produce a Policy Briefing Paper with the support of their SDS Sponsor.

SDS PhD Student Seminars
SDS also runs a series of Student Seminars for SDS PhD students. These provide a safe and productive space in which students can share their initial research and findings with peers and receive constructive and supportive feedback.

Wider Networking / Dissemination Events
The SDS PhD Team also organises wider networking events attended by a range of skills policy stakeholders and interested academics, to help students disseminate their research and get feedback from a much larger audience. The most notable gathering is our annual PhD Networking Event, which this year takes place in May. This year we are running our fifth event. These attract around 100 delegates including many senior policymakers and distinguished academics.

In addition to providing an excellent networking opportunity for our students, students also get the chance to take centre stage in presenting their research and can participate in a prize-winning PhD poster competition or Three Minute Thesis competition.

SDS hosts and organises the annual PhD Networking events in consultation with SGSSS. This year we are able to offer a more generous competition prize to students thanks to the additional support of SGSSS.

“I really enjoy the SDS student seminars, not only because I get to know about the interesting research that my fellow students are working on, but because they also give us the opportunity to meet other PhD students outside of our universities. The seminars helped to create a research community, where we can openly discuss research and various aspects of PhD life without fear of being judged or criticised. I find having this extra support network really valuable.”

Fanni Tamasi
SDS PhD Student

“SDS is positioned as a jewel in the crown for our collaborative PhD programmes.”

Prof Mhairi MacKenzie
Depute Director at the Scottish Graduate School of Social Science
Highlights of the Past Year

New Students:
The PhD Team welcomed four new students to the programme in 2019–20. This brings the number of PhD students co-funded and supported by SDS to 24 in total since the programme began.

Student Achievements:
We are delighted to report that last year was a record year for the number of students achieving outcomes from the programme.

- Three students were awarded their Masters’ Degrees prior to starting their PhDs
- Four more students passed their viva voce examinations and have, or soon will be, awarded a doctorate.

Student Destinations:
Every one of our students who have completed are now working in good quality research related jobs, indeed most of them found employment when they were still writing up their PhD research, which makes their achievements even more impressive!

Where our new Doctorates are working:
- Nottingham Business School, Nottingham Trent University.
- School of Social and Political Science, University of Glasgow.
- Centre for Longitudinal Studies, University College London.
- Edinburgh Business School, Heriot Watt University.
- Housing Statistics Team, Scottish Government.

PhD Internships completed
To date, seven PhD students have completed internships with SDS. All PhD students who complete an internship with us provide a feedback report at the end of their placement. The feedback from our 2018-19 Interns was again very positive. One of our Interns (also one of our PhD students) provides an in-depth case study on page 22 of the brochure.

PhD Engagement Programme Feedback:
We were very pleased to receive excellent feedback from SGSSS on our PhD Engagement Programme. This has developed ‘organically’ through the participation of our various partners – students, sponsors, academic supervisors etc. – letting us know what works well and coming up with innovative ideas on how to develop the programme.

By continuing to listen to and working closely with our partners we will ensure that the SDS Collaborative Programme continues to demonstrate good practice in engagement and impact. SGSSS said of the PhD Engagement Programme:
“We continue to be impressed by the ongoing excellent work that goes into making the SDS PhD Programme a success. It’s been a pleasure to see this in action over the last 12 months at events such as the Annual Networking Event, Student Seminars and Student Welcome and Induction Event. The buy-in from across SDS, dedication from individual colleagues in the PhD team and the ongoing enthusiasm for further enhancement sound like simple things but they really cannot be underestimated – it’s what makes the programme the success it is. Further participation in the SGSSS internship programme has opened even more opportunities to even more PhD students. Thanks to all at SDS and we’re looking forward to seeing further societal impact of this collaborative work in 2020”

Looking Forward to...

Student Seminar Series
The Seminar Series allows students to share their research and ideas with other SDS PhD students and colleagues. We aim to have one of these at least every quarter as they are a great opportunity for students to disseminate their research and they are always so interesting. The next seminar takes place in June when Katherine Stephen will be sharing insights from her PhD research entitled: ‘Meta-skills maturity for future workplace’

Knowledge Exchange
As part of our PhD engagement programme we will be organising several events for students to talk to SDS colleagues about their research. These might be KE learning events or Policy Briefings that happen towards the end of the PhD. The next knowledge exchange event will take place in Spring 2020. This is likely to be followed by a succession of policy briefing events as a number of our students are nearing completion.

Consolidating, Disseminating and Benefiting
As the SDS PhD Programme matures and develops, a significant body of high-quality, valuable academic research on the Scottish skills system has already been produced by our cadre of excellent PhD students. This year we look forward to a period of consolidation when we will place a renewed emphasis on interpreting and using the PhD insights to help inform skills policy and practice. As part of this we will be looking to produce a series of short papers on key themes and videos capturing key events and PhD presentations which we can disseminate to stakeholders.

New PhD topics awarded:
Two exciting new PhDs have been agreed, both due to start in October 2020. SDS will be involved in the recruitment of these PhD students.

Future models of enriched careers advice using machine learning: Edinburgh Napier University - PhD Information Science. Supervisors: Professor Hazel Hall and Dr Darren McGuire
Upskilling & reskilling workforces to transition from declining occupations to growth occupations: University of Stirling - PhD Management. Supervisors: Professor Abigail Marks, Dr Dimitra Gkatzia and Dr Peter Robertson
For more information about our PhD programme or if you would like information about any of the students’ areas of research please feel free to email us.

PhD@sds.co.uk