

## Skills Development Scotland Collaborative PhD Programme





Economic and Social Research Council



### Foreword

Welcome to the 2024/25 Skills Development Scotland (SDS) Collaborative PhD Programme brochure.

This brochure showcases our talented students and the breadth of research they are undertaking, as well as providing key information for our stakeholders.

This innovative and exciting venture was established in partnership with the Scottish Graduate School of Social Science (SGSSS) to:

- strengthen our links with the academic community in Scotland.
- bring fresh thinking to skills policy and delivery in Scotland.
- support new researchers to gain a deeper understanding of the unique Scottish skills system.

I am pleased that the Programme has been recognised as a 'demonstrator' of innovation and best practice in collaborative PhD research. The calibre of our students, the dedication of our PhD sponsors and the specialist input from SGSSS as our key strategic partner are all central to the programme's success.

Our PhD Programme continues to attract talented doctoral students who can look at issues from a fresh perspective, and grow individually and professionally through their research, while producing academically rigorous and exciting research on important and enduring skills issues in Scotland.

The research plays a crucial role in identifying new intelligence and translating key insights from our students' research into lessons for skills policy and practice. This is fundamentally important to the Programme as it allows us, with key stakeholders, to respond to the demands and best needs of businesses and individuals by continually fostering innovative approaches and improvements to products and services.

As Scotland addresses future challenges, and especially in the current context of the reform of the skills and learning landscape by Scottish Government, it has never been more important to explore new ways of thinking about how we can continue to serve our customers across Scotland.

I hope you enjoy learning about our inspirational cohort of students and the key areas they will examine this year in skills policy, skills delivery, and career information, advice and guidance.

Damien Yeates Chief Executive, Skills Development Scotland



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### What is the PhD Programme?

The Skills Development Scotland (SDS) Collaborative PhD Programme is a partnership between SDS and the Scottish Graduate School of Social Science (SGSSS). It was established in 2013 to enhance collaboration between the Scottish academic community and industry, supporting policy-relevant skills research.

Our PhD students explore key questions on skills policy, skills delivery, equalities, and career information, advice and guidance. The programme produces innovative research aligned to the evolving skills agenda in Scotland. It also helps to develop a new group of expert researchers with an in-depth understanding of the unique Scottish skills landscape.

### **Current university partners**





of EDINBURGH

**UNIVERSITY** of

**STIRLING** 



UNIVERSITY

Edinburgh Napier



University of Glasgow

### How does it work?

SDS identifies relevant careers and skills-related topics and then works with SGSSS to invite PhD proposals from academic supervisors. SGSSS and SDS select the most suitable proposals. Up to four sponsored SDS PhD students are enrolled each year, co-funded by SDS and SGSSS.

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

The following SDS PhD roadmap provides an outline of the SDS PhD student journey.



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### **Benefits of the PhD Programme**



Research on the Scottish skills landscape



High-quality research

ality

Collaboration with the academic community

The SDS collaborative PhD Programme has several benefits for SDS and its stakeholders:



Investment in high quality skills research, providing a robust and rigorous approach to tackling key skills policy questions and underpinning our approach as an intelligence-led organisation



Increased awareness of the value of academic research within the skills policy community, bringing theory, policy and practice closer together



New opportunities for PhD researchers to develop their knowledge and understanding within a policy and delivery context



Develops the supply of high-quality academic researchers with a deep knowledge of the Scottish skills system and landscape



New opportunities for PhD students to develop their skills and expertise within a workplace setting through PhD internships at SDS

### A word from our partner – The Scottish Graduate School of Social Science (SGSSS)



The Scottish Graduate School of Social Science (SGSSS) is the UK's largest facilitator of training, funding and support for doctoral students in the social sciences. Funded by the Economic and Social Research Council (ESRC) and Scottish Funding Council (SFC), we work across Scotland with 16 university partners and a range of external partners, such as Skills Development Scotland, to facilitate world-class PhD research.

Our objective is to equip our PhD graduates as independent thinkers who contribute to addressing global and systematic social problems. Our students' work has impact on achieving more sustainable, productive, equal and inclusive societies,

as per Scotland's National Performance Framework and the aligned UN Sustainable Development Goals.

A key route to realising these objectives comes from our students' collaborative work with those working in policy and practice. SGSSS' partnership with SDS is a prime example of how synergies between academic and policy/practice interests can lead to meaningful knowledge exchange and impact, enhancing career opportunities through collaborative studentships and PhD internships. Our PhD students who work with SDS receive great support, opportunities and connections through their studentships and/or internships, and consistently give us glowing feedback about the positive experiences they have had.

2024 marks the start of the next phase of funding for SGSSS, with renewed grants from the ESRC and SFC for the coming five years. We very much look forward to continuing to work with SDS, building on our established successes, and together enhancing the skills environment in Scotland and beyond.

#### **Professor Alan Marshall**

Depute Director SGSSS, University of Edinburgh



Scottish Graduate School of Social Science Sgoil Cheumnaichean Saidheans Sòisealta na h-Alba

### **Meet our current PhD students**

#### Economic and social outcomes of work-based learning across economic sectors: The case of Foundation Apprenticeships in Scotland

Academic supervisors: Professor Oscar Valiente and Dr Clara Fontdevila

SDS sponsors: Deborah Miller

Grace's thesis aims to understand how young people utilise Foundation Apprenticeships (FA) opportunities and credentials. Grace is interested in uncovering patterns of participation which may elucidate benefits or limitations for certain groups, and to contribute insights which might help address inequities. The research begins by mapping the rationale for FA. What are they designed to do? How are they expected to work? Drawing on policy documents produced by Skills Development Scotland and Scottish Government, Grace develops a clear picture of how the

programme is intended to function. The evaluation moves beyond efficacy, or whether interventions work, to explore how, for whom, and under what circumstances apprenticeships succeed. Grace employs mixed methods, using quantitative data to analyse post-apprenticeship outcomes, examining differences based on gender, economic sector, and levels of deprivation in various regions. Then, interviews with apprentices and other key stakeholders are held to contextualise patterns observed in the data. Qualitative insights into the decision-making processes of young people can help explain why some choose FA over other education options. Understanding support systems is essential for the success of apprentices and investigating the impact of participation on economic mobility and inequality reduction contributes to fostering inclusive growth. Grace's research investigates the pathways young people navigate through apprenticeships, paving the way for more informed policy and practice that empowers youth and promotes economic prosperity.

#### How artificial intelligence can be used to enhance the provision of labour market intelligence

Academic supervisors: Dr David Brazier, Dr Dimitra Gkatzia and Dr Matthew Dutton

SDS Sponsor: Katie Killen

Aleksander is researching how the provision of labour market intelligence data could be enhanced in Scotland using machine learning. He is exploring online job vacancy data to extract information about skills, knowledge, and job characteristics and requirements. The idea is to provide Scottish policymakers, training providers, and job seekers with timely, granular information about the Scottish job market and the underlying trends in skill demand.





**Grace Barrett** 



Later in his research Aleksander is planning to focus on the environmental aspects of the Scottish labour market providing insight about the classification of green jobs and skills. His methodology will merge the traditional machine learning approach with the expertise of labour market experts from SDS to deliver the best recommendations for research audiences.

## Virtual models of working and the implications for Careers, Information and Guidance

Academic supervisors: Dr Scott Hurrell and Dr Emma Bolger SDS sponsor: Lorna Stalker

Shayla has recently completed her Master's year as part of the 1+3 PhD Programme and moved onto her PhD.

The COVID-19 pandemic has proven unprecedented in accelerating moves to remote working. Not all workers benefit from remote working however, and disadvantage will likely be experienced by those transitioning from education to work. Disadvantaged groups will need targeted Career Information, Advice and Guidance (CIAG), to ensure they do not face career disadvantage because of remote working catalysed by COVID-19. A mixed-method, multi-stage design will be used to investigate the kinds of interventions needed. The approach will first analyse secondary datasets to establish the extent of remote working disadvantage and which groups are worst affected.



The final research focus will be determined after the initial secondary analysis stage but is likely to include in-depth interviews and/or focus groups with people experiencing disadvantage to

to include in-depth interviews and/or focus groups with people experiencing disadvantage to understand the nature of their experiences and career impediments along with interviews with senior CIAG policy makers, to shape findings into recommendations for CIAG delivery and intervention in Scotland.

## Gendered information landscapes and their impact on routes into and through apprenticeships

Academic supervisors: Dr Ella Taylor-Smith, Dr Sally Smith, Dr Colin Smith SDS sponsors: Michelle Goldenpenny and April Robertson

Maria's research maps the information landscapes of young people and examines their impact on routes into and through apprenticeships and work-based learning. Maria is particularly interested in understanding how different sources of gender stereotyping impact on young people's career choices. The research uses a mixed methods approach to examine the current policy and literature on occupational segregation, and to investigate young people's situated experience of information related to apprenticeships and work-based learning. Maria hopes to be able to provide accessible outputs which can be used by policy makers and practitioners to help inform future policy and practice on gender equality in careers.







## Fostering intrapreneurship in Scotland: Internal and external factors, influences and tensions

Academic supervisors: Dr Scott Hurrell and Dr Jillian Gordon SDS sponsor: James Burns

Róisín's PhD research explores the facilitation of intrapreneurship within different organisational sectors and settings, in a Scottish context. As intrapreneurship is becoming an important source of competitive advantage, carrying out this project to investigate the facilitating factors of intrapreneurship is both timely and critical.

Her innovative project links concepts of organisational culture, organisation structure, and Human Resource Management to explore the skills and factors which enable intrapreneurship. Additionally, she is considering the impacts of the external environment in the facilitation of intrapreneurship. The practical impact of this research will be far-reaching across all sectors for organisations, informing them of the enabling factors and drivers which encourage and advance intrapreneurship.

Where to next? Post-school transitions and career decisions among young people in Scotland – insights from the Growing Up in Scotland study

Academic supervisors: Dr Valeria Skafida and Dr Elke Heins SDS sponsor: Dr Patrick Watt

Hannah is really excited to start her PhD for many reasons. Hannah is looking forward to working with fellow students, supervisors, and other staff members at the University of Edinburgh and Skills Development Scotland. Hannah is eager to further develop her social research skills, and deepen her knowledge on the labour market and training in Scotland. Hannah hopes that her PhD will allow her to make a real difference on the lives of some school leavers in Scotland through contributing to Skills Development Scotland and national policymaking, as well as advance her own career in social research.











Transformative skills in the energy just transition: Mixed-methods pathways for upskilling, reskilling, and engaging new entrants in Scotland

Academic supervisors: Dr Kirsten Jenkins, Dr Craig Anderson and Professor Dan van der Hor

SDS sponsor: Dr Allison Carrington

Kaja's PhD aims to investigate the skill landscape of Scotland's energy sector. This project is designed to enhance our understanding of how Scotland's transition to Net Zero will affect the energy workforce and the skills required by Scotland's energy sector. Understanding where skills are transferrable from Scotland's fossil fuel industry to low-carbon energy solutions and identifying skill gaps and training opportunities is a crucial part of Scotland's journey towards Net Zero.

Further, this project aims to understand what factors influence an individual's ability to engage in work-related learning and training opportunities to ensure equal access to skill development opportunities in the energy sector. While the energy industry skills gap has been identified as a significant challenge to Scotland's Net Zero goals, it is also a great opportunity to increase equality and diversity in Scotland's energy industry and address justice concerns as we move towards a greener future.

#### Work-based learning (WBL) in the digital age

Academic supervisors: Dr Pauline Anderson and Professor Dora Scholarios

SDS sponsor: Lewis Gale

Stephen's research focuses on how expert knowledge, skills and learning is changing as a result of technological progress.

His research considers what knowledge and skills are required to fully utilise new technologies and aims to understand how expert workers are learning to incorporate these into practice. It is also considering how tasks and activities of expert work are changing as a result of technological advancement and how policy can make WBL an attractive and realistic proposition for all, particularly expert workers.







## Creating sustainable communities through the development of skills

Academic supervisors: Dr Darren McGuire and Dr Kendra Briken SDS sponsor: Dr Lynne Robson

Anya is researching meta-skills, youth transitions and socioeconomic status. Anya is working to understand the ways in which socio-economic status influences how young people acquire and develop meta-skills. While meta-skills can be gained in many life situations, it is possible that there is a difference in how and why meta-skills are gained, developed, and used between young people of different socio-economic status. Meta-skills are becoming increasingly important in the quickly changing job market. If there are significant differences in how they are obtained and developed by people of differing socio-economic status, this could have consequences on an individual's ability to gain meaningful employment.

#### Neurodiverse youth identities in career transition: Between the physical and the virtual world of work

Academic supervisors: Professor Kathleen Riach and Dr Evangelia Demou SDS sponsors: Dr Emma Hollywood and Ian Bruce

Martina's PhD looks at neurodivergent youth career trajectories within increasingly digitalised workplaces. This considers not only what drives their decisions to pursue a specific career trajectory, but also how they make sense of them, and the ultimate impact on their mental health. It uses a mixed method approach, collecting semi-structured interviews through photo-elicitation to understand young neurodivergent lived experiences of career

transitions, and analysing secondary quantitative data to provide insights of how their career trajectories have evolved over time and the impact on mental health. The study's final aim is to help support young neurodivergent careers aspirations, providing insights on, and help to reduce their high unemployment level.









## Exploring labour market inequalities experienced by unpaid carers and people with disabilities

Academic supervisors: Professor Paul Lambert and Dr Alasdair Rutherford

SDS sponsor: lan Bruce

Louise's research focuses on labour market inequalities experienced by unpaid carers and individuals with disabilities. The research draws on a comparative analysis of three large-scale social survey datasets: the Scottish Health Survey, the Labour Force Survey, and Understanding Society.

The first phase of Louise's study examines the likelihood of people with disabilities and unpaid carers participating in employment,

education, or training. She then delves deeper into the nature of this participation, investigating factors such as the likelihood of working in specific industries, part-time roles, zero-hour contracts, and access to flexible working arrangements.

In the final phase of Louise's research, the focus is shifted to employment quality. Moving beyond traditional assumptions about what constitutes "good" employment, she explores how different types of work impact the well-being of unpaid carers and individuals with disabilities.

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

Academic supervisors: Dr. David Haynes and Dr Peter Cruickshank SDS sponsor: Frank Quinn

John's research is looking at Work-based Learning Environments (WBLE), exploring the languages and frameworks practiced by industry. An important focus will be on current provision and how WBLEs can be transformed to maximise economic benefits for individuals, firms, and society. Then John's 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 WBLEs. Specific areas of interest include the impact of Industry 4.0, business maturity and communities of practice.







#### Care Experienced Young People's Futures as Successful Adults: A Participatory Action Research Project in Dumfries and Galloway

Academic supervisors: Dr David Lundie, Dr Shaia Shirazi and Dr Gillian Brydson SDS sponsors: Greg Hiddleston, Roddy Bailey and Andrea Hall

Elle's PhD uses participatory action research to understand and enhance practice in supporting care-experienced young people transitions to successful adulthood. By exploring policy and adult framed expectations of youth transitions with young people the project aims to: understand the local, intersectional challenges of policy and practice that impacts on care experienced young people's transitions to adulthood; co-design the research project, including identifying research questions, by developing a 'research advisory group' made up of a representative sample of young people with ex-

perience of care; co-produce knowledge in relation to exploring, understanding and questioning the poor outcome's narrative driven from the lived experience, thoughts and perspectives of the young people themselves; promote active engagement of young people throughout the process encouraging meaningful participation and power sharing leading them to take action, driving change and improving policy implementation and practice from the bottom up; improve conceptual understanding of meaningful participation and engagement of young people in research and the development of improving policy and practice which impacts their lives.

#### Meta-skills maturity for future workplaces

Academic supervisors: Dr David Brazier, Emeritus Professor Hazel Hall and Dr Colin Smith

SDS sponsor: Lewis Gale

Katherine's research focuses on meta-skills – those higher-order skills which help people organise and accumulate other skills, such as self-regulation, curiosity, and cognitive resilience. Katherine is using multiple qualitative methods to investigate the measurement and development of these skills in experiential learning environments such as apprenticeships.

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 prepared to adapt and manage their position within the future labour market, with its challenges of automation, socio-political change and multi-job careers.



University of Glasgow



Katherine Stephen



## Supporting the key influencers in young people's career development

Academic supervisors: Dr Dave Griffiths and Dr Marina Shapira

Gaile's research explores the careers guidance and support networks utilised by young people to inform their options, opportunities, and career paths. This includes the role of family, friends, educational institutions, voluntary organisations, and other potential sources of information. It involves quantitative analysis of British Household Panel Survey and Understanding Society datasets.

## Technology adoption and skills development in Scottish manufacturing SMEs

Academic supervisors: Professor Ronald McQuaid and Dr Belgin Okay-Somerville

SDS sponsor: Denis Donoghue

The overarching aim of Fanni's PhD research is to understand the impact of new technology adoption on skills requirements in Scottish manufacturing small and medium enterprises (SMEs). The research highlights the need for a more nuanced view on technologies when looking at the impact of technological transformation on organisations and skill requirements, and the need to examine the organisational context when studying this interplay between technology and skills. The study compares the implementation of four types of technologies and their consequent effects on skill requirements in manufacturing SMEs. Overall, the study contributes to discussions on skills development initiatives in

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the face of Industry 4.0 in the manufacturing sector, with a unique focus on small and medium enterprises. From a policy perspective, the research will identify sectoral best practices and inform current sectoral skills development initiatives on the unique needs of SMEs.





STIRLING

## Natural language interfaces to support career decision-making of young people

Academic supervisors: Dr David Brazier, Dr Dimitra Gkatzia and Professor Peter Robertson SDS sponsor: Sandra Cheyne

Marianne's research explores how automated dialogue systems could be used to supplement career services for young people.

This is a multi-disciplinary collaborative project incorporating understanding the career related tasks that a conversational agent could effectively support; the information required to provide this support; and designing the interaction to meet the needs of young people. A key focus will be understanding how the ethical standards of such a system could be assured.

## Informing Scotland's CIAG services for all life stages

Academic supervisors: Dr. Elke Heins, Professor Daniel Clegg SDS sponsor: Emma Parry

Sarah is conducting her research part-time, focusing on enhancing Career Information, Advice, and Guidance (CIAG) services for adults at various life stages. Her research will explore the challenges and barriers adults face in today's increasingly complex career paths and non-linear employment patterns.

She will consider how this evolving landscape requires a more flexible and inclusive approach to career guidance, one that addresses both individual needs and systemic barriers and aims to generate evidence-based recommendations to inform the redesign of an all-age, inclusive CIAG framework for Scotland.









### A Closer Look at... Anya's PhD

The process of becoming a socially and economically responsible adult has never been easy but for today's youth there is added precarity from rapid changes in the labour market. The concept of individual resilience is quickly becoming essential criteria for young people as they will likely need to be able to adapt to new situations and learn job-specific skills when switching between workplaces or industries. Meta-skills is a term used to describe the broad set of skills required to facilitate this necessary resilience. Meta-skills are gained through experience and require individuals to reflect on their past, current and potential future experiences in order to be used effectively in multiple situations.



Skills Development Scotland has identified twelve meta-skills that fall under the categories of self-management, social intelligence and innovation, and has been working with educators to better integrate meta-skills into compulsory education. There is a need to know if there any systemic barriers to meta-skills development or usage that could be alleviated from actions taken by SDS or other relevant actors. Anya's research looks to examine these potential barriers amongst young people aged 16-18.

In October 2022, Anya interviewed 30 young people aged 16-18 living in Clackmannanshire about their experiences of gaining and using meta-skills. The semi-structured interviews were conducted across the three schools and included participants from different genders and socio-economic backgrounds. During the interviews, Anya conducted a reflective exercise with the participants to identify the different sites of skills development the young people had experienced. Anya encouraged the young people to think broadly about their experiences as evidence suggests that the experiential learning required for meta-skill development can occur in all areas of life. Anya also asked questions relating to how these young people understood and valued these skills for their current and future use. After the interviews, young people were provided with copies of the reflective exercise as reference points for their future education or employment applications.

Analysis of the data suggested that all the young people interviewed had opportunities to develop meta-skills and understood their importance for their overall capabilities. Meta-skills development frequently occurred in supportive, experiential learning environments such as football teams or dance squads. Schools and other community actors played an important role in providing sites for skill development, such as through school cafes or long-term volunteering. Interestingly, while all the participants valued their meta-skills, few actively participated in activities for the purpose of developing their meta-skills. Instead, desire to participate was driven by enjoyment of the activity and young people would also unintentionally support the development of their meta-skills through the organic organising of bands or clubs. It was also found that meta-skill development occurred through caring activities in the home, from looking after younger family members to cooking and cleaning.

These caring activities, while rarely discussed in meta-skills research, were important sites of meta-skills development for young people who did not have the same access to free-time for extra-curricular activities as their peers due to caring responsibilities. Additionally, all participants were far less likely to give significant value to the skills gained from caring activities in comparison to their skills gained outside of caring activities, even when their caring activities had required a more complex and refined use of skill than their other sites of skill development. These initial findings suggest a complex relationship between meta-skill development, usage and valuation that Anya will continue to investigate during the writing-up stage of her PhD.

Anya presented her research at the 2023 SDS PhD Networking Event and as part of the SDS 3MT<sup>®</sup> competition in 2021, 2023, and 2024. This research has been presented at several internal events held at the University of Strathclyde.

In 2022, Anya participated in a three-month long social research internship at the Scottish Government. There she worked with the Local Government Analytical Services Division to support analysis of the implementation of the Community Empowerment Act and the impacts of financial support provided to Credit Unions. From August 2021 to April 2024, Anya was a CV Advisor at the University of Strathclyde's Career Service and helped hundreds of students to better their understanding of skills.

### **SDS Sponsor Spotlight**

The centrepiece of the SDS PhD Programme is our network of our SDS colleagues who are PhD sponsors. They play a vital role supporting students to connect with the policy world, sharing learning from the research throughout SDS and ensuring impact.

#### SDS sponsor: Sandra Cheyne PhD Student: Marianne Wilson

## Natural language interfaces to support career decision-making of young people

I have had the absolute privilege of sponsoring Marianne from the outset of her research into natural language interfaces to support the career decision-making of young people.

Marianne is exploring how automated dialogue systems could be used to supplement career services for young people.



Sandra Cheyne

I work in the National CIAG team and lead on CIAG policy and

professional practice. To me, Marianne's research is of immense interest and value, as we shape our understanding and ethical career practice in a world of generative Al. I collaborate with colleagues from the Career Development Institute (CDI), across our four nations and internationally. This has enabled the opportunity to link Marianne into emerging work and thought within our career development sector, and to position Marianne's PhD research as informing and influencing others beyond SDS.

The collaborative nature of this PhD cannot be understated. Marianne engaged in her first year with the National CIAG team to understand our approach to career guidance and career management skills in Scotland. She moved onto survey work with groups of Careers Advisers, engaging with an international career development chatbot project, and working with the CDI to build sector wide learning. Marianne joins sessions and advises our four nations career development sub group on AI and has presented at our CIAG all staff event. She has worked with Scottish Government colleagues exploring AI in the public sector, as well as being an active member of our SDS AI working group exploring Microsoft AI tool use. The list of Marianne's contribution and impact goes on!

We sign up to an ethical code as career practitioners and a set of sector national occupational standards. The ethical and impartial nature of our work means that we have to continually evolve just as our customers have to in a dynamic world. With this in mind, Marianne's knowledge and expertise recently supported national CIAG colleagues to create the initial AI ethical guidance for career practitioners in SDS. We are finalising a suite of mandatory career professional learning and Marianne has advised throughout and contributed to the creation of this.

Research in an applied field such as career development has to walk hand in hand with practice. As a profession, we are inquisitive. We look at the story; the narrative and the possibilities of our customers. CIAG research requires you to understand practice and to reach out to practitioners in a range of ways. I continue to thoroughly enjoy exploring and being curious through the conversations and activities Marianne's research affords us in our applied setting. The collaborative nature of her research and expertise gives us a voice and will help us shape the service we provide to our all-age customers now and in the future. I thank Marianne for that and our colleagues who have engaged with her so far, and those who will as her PhD progresses.

### Meet our sponsors



**Dr Allison Carrington** Student: Kaja Horn



**Denis Donoghue** Student: Fanni Tamasi



Ian Bruce **Student: Louise MacAuley** 



**Lorna Stalker Student: Shayla Bletsoe** 



**Roddy Bailey Student: Elle Scott** 



**Andrea Hall** Student: Elle Scott



Dr Emma Hollywood Student: Martina Lippi



**James Burns** Student: Roisin Dooley-Nealis Student: Aleksander Bielinski Student: Stephen Hughes



**Dr Lynne Robson** Student: Anya Kaufman



Sandra Cheyne **Student: Marianne Wilson** 



**April Robertson Student: Maria Cecil** 



**Frank Quinn Student: John Marshall** 



**Katie Killen** 



**Michelle Goldenpenny Student: Maria Cecil** 



**Deborah Miller Student: Grace Barrett** 



**Greg Hiddleston Student: Elle Scott** 



Lewis Gale and Katherine Stephen



**Dr Patrick Watt Student: Hannah Glover** 

### **SDS PhD Internships**

SDS works in partnership with SGSSS to offer internship opportunities to students undertaking a PhD within a SGSSS member institution in Scotland. 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.

### A closer look at... Vera's Internship

I applied for the internship with the Evaluation and Research team at Skills Development Scotland right before I was about to start my third year in my PhD. The team accommodated my schedule, so that I completed it in the latter half of the academic year. This experience complemented my academic pursuits, offering a refreshing change of pace and a chance to apply my expertise in a dynamic, real-world setting. My background in quantitative methods and proficiency in R programming made me an ideal fit for SDS.



Vera Feng

The internship aligned perfectly with my skills, allowing me to contribute meaningfully while gaining insights into public sector research and its role in evidence-based policy making.

From day one, I was warmly welcomed by the team. My main task was on improving the team's data analysis and visualisation capabilities. Upon examining the existing analytical code and research data, I recognised an opportunity to enhance efficiency. I developed a systematic approach using R, leveraging functions and loops to standardise data processing across projects with similarly structured datasets. This not only streamlined the analysis process but also significantly improved its reproducibility, allowing easy updates as new data became available and ensuring consistency in output across different projects.

One of the most rewarding aspects of the internship was the opportunity to share my knowledge with the team. I prepared commented coding materials using R Markdown and conducted several skill-sharing sessions on R and data visualisation, which was an unexpected but fulfilling addition to the internship. These sessions helped upskill the team and improved my own communication skills with non-academic audiences. The fast-paced nature of the work at SDS was both challenging and exciting. I found myself juggling multiple projects, including some time-sensitive ones. I have learnt a lot about prioritising tasks and efficient project management within this multitasking environment.

My work at SDS has also made a tangible impact. The improvements I made to the analytical processes and visualisations received positive feedback from all the colleagues in the team, as well as senior leadership of the organisation. This recognition was incredibly motivating and demonstrated the value of my skills outside academia.

Reflecting on my time at SDS, I am grateful for the supportive and encouraging environment. The internship not only enhanced my technical skills but also boosted my confidence and opened my eyes to career possibilities beyond academia. The experience of working in a team, meeting deadlines, and presenting findings to various stakeholders has been invaluable for my professional development. To any PhD student considering an internship at SDS, I wholeheartedly recommend seizing this opportunity. It's a chance to apply your expertise, learn new skills, and gain insights into how research can drive real-world change.

### **SDS PhD Programme events**

SDS provides a rich and varied programme of events for our PhD students to support dissemination, impact and networking. The Programme aims to support the development of innovative research on skills and learning and feed this back into an applied setting within SDS, helping to promote real-world impact.

## Annual Networking Event 2024: Collaborative research for a changing world

The latest SDS PhD Programme Annual Networking Event took place on Friday 21st June 2024 at the University of Strathclyde. The event brought together academics, PhD students, SDS colleagues and key stakeholders to share research insights and celebrate the impact of the SDS PhD Programme.

The keynote speaker, Professor Patricia Findlay from the University of Strathclyde, highlighted the 'grand challenges' Scotland and the world faces. Patricia outlined the importance of evidence-based policy to address these challenges. She emphasised that genuine collaboration between academia and industry offers significant potential for mutual gains.

"It's always really nice to spend time amongst SDS colleagues in this context, and I've been to these events before, but the whole highlight of these events is listening to the PhD student presentations. The presentations today were really high quality, really good innovative methods, really well delivered. So it's a complete pleasure to hear what the SDS PhD students are doing and how they convey that to a wider audience."

Professor Patricia Findlay, University of Strathclyde

Paul Bradshaw, Director of the Scottish Centre for Social Research, outlined the research potential and innovative nature of the Growing up in Scotland survey. SDS contributes questions to GUS and SDS PhD student Hannah Glover will be analysing this dataset for her research.

The event concluded with a presentation from Grahame Smith, Interim Chair of the Careers Collaborative who outlined the benefits of collaborative research to inform the work and future direction of the Careers Collaborative. SDS PhD student Marianne Wilson reflected on the benefits of attending the Annual Networking Event.

"I think it's always really interesting to hear what other people think about the research that I'm doing. I always find that the questions that you get asked at events like this really kind of spark new ideas about where you want to go with your research."

Marianne Wilson, SDS PhD student



Grahame Smith, Careers Collaborative



### **Three Minute Thesis® competition**

During May of 2024, we held our annual Three Minute Thesis (3MT®) competition for SDS and non-SDS PhD students. Entrants provided a three minute video outlining their research question, approach, and its importance to policy.

The judging panel included: Head judge Dr Emma Bolger, senior lecturer and programme leader of the MSc in Career Guidance and Development, University of the West of Scotland; Professor Graeme Nixon, Director, SGSSS; Lorna Stalker, National Operations Executive SDS; and Dr Patrick Watt, Head of Evaluation and Research, SDS.

"When you're at any stage in your PhD study, just being a doctoral student means that you've got so much going on, so many plates spinning at once and so much to think about and doing a three-minute thesis can really help you focus in not necessarily on the whole piece of work, but an aspect of it that you feel you can cover well in three minutes. That conveys something that you've gained from your study, something that is valuable to other people. It's a really good opportunity to pause and think about where you're at in your research."

Dr Emma Bolger, senior lecturer and programme leader of the MSc in Career Guidance and Development, University of the West of Scotland



Marianne Wilson, SDS PhD student collecting 3MT® prize

"The standard of submissions was very high indeed and all 3MT® videos were engaging and insightful. It was, therefore, a real pleasure to be involved in the judging of the competition and support from SDS helped greatly to facilitate the judging process. The high standard meant that this was a difficult decision. The judging panel discussions were detailed, transparent and reasoned which gave confidence in the competition outcomes."

#### Professor Graeme Nixon, Director, SGSSS

"I thoroughly enjoyed being part of the 3MT<sup>®</sup> judging panel this year and was impressed by the quality of all entries. The diverse knowledge exhibited by PhD students across a range of topics made judging challenging. Each student exhibited commitment and passion for their research and were able to highlight important key features. I watched each 3MT<sup>®</sup> several times. This served to increase my curiosity about the research topics and respect for each student. Although the judging panel decided on winners, we agreed that every student delivered an excellent 3MT<sup>®</sup> presentation."

Lorna Stalker, National Operations Executive SDS

There were four winners overall in the four categories of PhD Award, Masters Award, Non-SDS Student Award and People's Choice Award.



**PhD Award** Marianne Wilson

Edinburgh Napier University



Masters Award Hannah Glover

University of Edinburgh



Non-SDS Student Award Rachel Allen

University of the West of Scotland



**People's Choice Award** Velia Manyonga

University of Strathclyde

"My biggest challenge was ensuring that the three-minute presentation provided clear motivation, background, significance to the research question, research methods, results, and conclusions. It was an uphill task to include all of these in just three minutes. I enjoyed the process of summarizing my study while making sure all-important information was conveyed. I had to practice repeatedly before recording. Then I had to record and re-record multiple times on my own. It was exciting to listen to my recordings and note that I sometimes missed critical information, prompting me to redo it repeatedly. Overall, it was an interesting journey."

Velia Manyonga, University of Strathclyde and winner of the People's Choice Award

"The biggest challenge for me was definitely figuring out how to articulate my research plans. Competing in the SDS 3MT competition really helped me focus my Master's research down to its key components. I most enjoyed getting to view all the submissions to the SDS 3MT - it's always wonderful to hear about the research that other students are conducting, and it was great to network with some of them at the SDS event. The 3MT competition acted as both a fantastic icebreaker and way of quickly understanding what my colleagues are working on, and I really value the connections that SDS events such as this facilitate."

#### Hannah Glover, University of Edinburgh and winner of the Masters Award

The winning 3MT<sup>®</sup> videos were announced and shown at the Annual Networking Event in June 2024.

### **PhD Programme impact events**

We run impact events for SDS colleagues, bringing together SDS PhD students on the themes of Careers Information, Advice and Guidance (CIAG); Equality, Diversity and Inclusion; and Work-based Learning with colleagues in these areas.

Students have the opportunity to feed into the design and delivery of services by presenting their research findings to relevant staff who can then feed research into practice, supporting our goal to be an evidence-led organisation.



#### **SDS PhD student seminars**

SDS runs a series of online student seminars for SDS PhD students. These provide a safe and productive space for students to share their research approaches and findings with other students and SDS colleagues at different points during their PhD. The seminars enable students to receive constructive and supportive feedback and ensure that policy and practice links are considered throughout the research process.

#### **Masters events**

PhD students who undertake a Masters as part of their PhD are invited to attend a seminar with SDS staff to present their dissertation findings and outline their PhD plans.

#### **Buddy system**

We know that effective support plays a key role in ensuring that students settle into the PhD Programme well and develop a strong sense of community. SDS operates a buddy system for our new PhD students where they are matched with an existing student for informal support along their journey.

#### Raising the profile of SDS

The PhD programme and the research being undertaken by SDS PhD student Elle Scott was nominated for an Excellence in Innovation award by Who Cares? Scotland in August 2024.

#### Student welcome and induction events

All new students are invited to attend an SDS welcome and induction event. This event introduces the SDS PhD Programme and SDS as an organisation. Our induction provides an opportunity for new students to meet with their SDS sponsor, SGSSS colleagues, other new students, the SDS PhD team and their PhD student buddy.



#### PhD insight events

These events are organised towards 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. These events are also invaluable practice for students preparing for their viva.



How are (care experienced) young people's futures as successful adults understood?

What stories are told about their futures as successful adults?

How might these stories influence what they think is possible in adulthood?

How might these stories impact on them achieving success, as they understand it to be?

What could change if other stories were told?



### Meet our alumni

The following students 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 will earn the title Doctor.

Name	PhD title
Dr John Evans	Shaping apprenticeships: strategic actors in skill ecosystems
Dr Magdalena Gilek	The impact of job quality on mental health among young workers in the UK
Dr Gabi Lipan	Mind the GAP: an investigation into the factors influencing student, academic and employer perceptions of graduate attributes
Dr Alana McGuire	The impact of big data on skills requirements
Dr Lyndsey Middleton	Exploring the development of innovative work behaviour of employees in multiple workplace contexts
Dr Marina Milosheva	Career information literacy and decision-making behaviours of young people
Dr John Mowbray	The role of networking and social media tools during job search: an information behaviour perspective
Dr Kane Needham	The role of social networking sites in career management
Dr Petri Simonen	Young people's key influences for transitions into the world of work and the role of careers guidance in Scotland
Dr Paul Quigley	How do employers engage with apprenticeships in Scotland?
Dr Bozena Wielgoszewska	Understanding university graduates' social mobility trajectories: how does the route affect the outcome?



### Dr John Evans



## Shaping apprenticeships: strategic actors in skill ecosystems

John's research considered the power relations between strategic actors and their repercussions for the shape and direction of apprenticeships. The research adopted a comparative case study design looking at engineering apprenticeships in Scotland and England, using an adapted 'skill ecosystem' lens to dig deep into actor power in skills systems. His research increased understanding of the division of labour between actors in the context of apprenticeships, analysing roles, interests, and relative power to shape skills.

John graduated in 2020 and now works at the Migration Advisory Committee (MAC) as the Head of Strategy, Policy, and Devolved Nations.



## The impact of job quality on mental health among young workers in the UK

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 impact 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 graduated in 2020 and currently works as a lecturer in HRM and Organisational Behaviour at Edinburgh Napier University.





# Mind the GAP: an investigation into the factors influencing student, academic and employer perceptions of graduate attributes

Gabi was the SDS PhD Programme's first 1+3 student. He completed his Master's at the University of Aberdeen and submitted his PhD in 2021. Gabi started his PhD by investigating the factors influencing student, academic and employer perceptions of graduate attributes. He then moved on to creating a universal model of graduate attributes and validating this model with stakeholder input. After the "7i Model" of graduate attributes was finished, Gabi's final PhD year was dedicated to the assessment of them. Applying methods used in high-risk industries such as aviation, Gabi created a behavioural markers system that can be used to assess and give feedback on observable 'easy to see' attributes. As graduate attributes and meta-skills are inter-related, this approach can be adapted to the SDS meta-skills model. In addition to his academic work, 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. After finishing his PhD, Gabi worked as a Data Literacy Coach at Multiverse and is now working as a Coach Enablement Principal at Multiverse.



#### The impact of big data on skill requirements

Alana's research looked at the ways in which rapid advances in information technology and the emergence of Big Data are changing the nature of employer demand for skills and the pace at which skills supply needs to change to enable employers to remain competitive. The research also explored the barriers facing employers in responding to the need to develop skills in working with Big Data and considered whether there was evidence of social, gender, and ethnic inequalities in the distribution of Big Data skills. Key findings included the need to see the value of data, improving skills and training and finding solutions to personal data storage, particularly around trust in cloud storage.

Alana passed her viva in 2021 and now works at Skills Development Scotland as a Skills Planning Executive.



Edinburgh Napier

UNIVERSIT



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

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 as part of the framework development to provide a series of recommendations to practitioners.

Lyndsey graduated in 2020 and currently works as a Senior Assistant Statistician in the National Performance Framework Evidence and Reporting Team at the Scottish Government.





## Career information literacy and decision-making behaviours of young people

Marina's doctoral work focused on generating new knowledge of young people's career decision making and on the identification of means to enhance their career information literacy skills. It explored the role of information access, use, and evaluation in career development learning and career decision-making processes, to identify specific information literacy skills that can support young people's career development. The research implemented inquiry into social sources of career information, which have been shown to be highly influential in career decision-making and explored young people's responses to career information in different contexts.

Marina graduated in 2024 and currently works as a Youth, Schools and Mindsports Researcher within the Faculty of Social Sciences (in the Sociology, Social Policy and Criminology unit) at the University of Stirling, and a member of "Bridge: A Mindsport for All" (BAMSA). She is part of the team working on the "Bridge, Youth and Mindsport Education" research project, which aims to develop means to support young people's bridge and mindsport education in Scotland.



## The role of networking and social media tools during job search: an information behaviour perspective

John's research investigated job search networking amongst 16 to 24-year-olds living in Scotland. John explored the role of social media platforms in job search through 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 demographics 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, he has used his findings to create a detailed list of recommendations for practitioners.

John graduated in 2018 and currently works as a Research Officer with the Scottish Government.



Kane's PhD explored the role of social networking sites (SNS) and the wider internet as a revolutionary platform for career management. 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 are 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 and at the continuing relevance of informal methods of finding work, such as through a personal contact.

Kane graduated in 2019 and currently works as a Postdoctoral Researcher at the University of Hull.

#### Dr Petri Simonen



#### Young people's key influences for transitions into the world of work and the role of careers guidance in Scotland

Petri's research examined how different influencers can affect young adults' educational choices and when those different influencers were important in the young adults' journeys. The study was conducted in a Scottish policy context. As a result, the study also examined how Career Information, Advice and Guidance (CIAG) services paired with measures included in policies such as Developing the Young Workforce (DYW) to influence young adults' decision-making. This influence took place mostly through information and support provided by different institutional influencers both in and outside schools.

Petri passed his viva in May 2023.



## How do employers engage with apprenticeships in Scotland?

Paul's research looked to enhance understanding of how employers engage with apprenticeships across Scotland. The key focus of the research was to examine the decision-making process for employers when they are considering apprenticeship engagement, and to develop knowledge on what motivates employers to recruit apprentices. It considered the impact of the Apprenticeship Levy as well as other incentive programmes developed to battle the economic downturn brought on by the COVID-19 pandemic.

Paul graduated in 2024 and currently works at the University of Glasgow as a lecturer in HRM and Organisational Behaviour.



#### Dr Bozena Wielgoszewska



## Understanding university graduates' social mobility trajectories: how does the route affect the outcome?

Bozena's thesis examined relationships between university graduates' work histories and their social mobility trajectories, accounting for several additional characteristics. Her research used a sample of over 1,000 graduates from the 1970 British Cohort Study to reconstruct their economic activity trajectories before deploying sequence analysis to derive a typology of graduates' progression through social classes, and a typology of career pathways. She found that a relationship exists between career type and social mobility trajectories, however additional factors (such as social, geographical and individual attributes, migration trajectories and characteristics of higher education degrees) also play a role. Bożena's research shows that career type is the missing link in contemporary social mobility research.

Bozena graduated in 2019 and is now a Research Fellow in the Social Research Institute at University College London. She works at the Centre for Longitudinal Studies, where she leads two research themes "Inequality, Poverty and Social Mobility" and "Labour Market and Skills".

### Looking forward to...



### **Student seminar series**

Our seminar series enables SDS PhD students to share their research and ideas with other PhD students and colleagues. We have at least four seminars each academic year where we hear from students at all stages of their PhD journey.



### **Annual Networking Event**

We are looking forward to hosting our next Annual Networking Event in 2025.



# Continuing to disseminate and innovate: impact events

The PhD Programme is now firmly established, and our cohort of excellent PhD students have produced a significant body of high quality, valuable academic research on the Scottish skills system.

We run thematic impact events aimed at bringing together PhD students to present their work to SDS colleagues on a number of relevant themes.

### Meet the PhD Impact and Insight Team

Based in the SDS Evaluation and Research team, the Insight and Impact team support the delivery of the SDS collaborative PhD Programme and are also responsible for equality, diversity and inclusion research across SDS.

In delivery of the PhD Programme, we work closely with our students, academic supervisors, SDS sponsors and the SGSSS to ensure the success of our collaborative approach.

We organise events including the annual networking event, student seminar series and the 3MT® competition. We support our sponsor and student networks, buddy system, organise PhD internships in SDS, and assist in the development of new PhD topics and in the recruitment of new students.

The team is also committed to supporting young talent by having a Graduate Apprentice working on the PhD Programme and supporting the Evaluation and Research Team.

Get in touch with us: PhD@sds.co.uk



Dr Emma Hollywood Insight and Impact Manager



**Rachel O'Hare** Evaluation and Research Graduate Apprentice



**Dr Emma Parry** Evaluation and Research Executive

For more information about our PhD Programme or if you would like information about any of the students' areas of research please get in touch.

PhD@sds.co.uk

https://www.skillsdevelopmentscotland.co.uk/what-we-do/research-andinsight/phd-programme/



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