



SGSSS SDS Collaborative Studentship Competition 2024/25

PhD Programme Topic Descriptions

This document outlines the four topics identified by Skills Development Scotland (SDS) for the 2024/25 competition call.

1. **Proposed Title:** Exploring transitions to early adulthood using data from Growing Up in Scotland

Background

The transition to early adulthood presents many challenges and can be shaped by early childhood experiences and wider socio-economic circumstances. In supporting the career decision making of young people it is important that SDS fully understands the factors shaping these transitions. <u>Growing Up in Scotland</u> (GUS) tracks the lives of thousands of children and their families from childhood into adulthood. The dataset is recognised as a key source of information for policy makers. Questions suggested by SDS were included in the survey in 2021 and SDS will contribute to questions for the next wave of the survey in 2025. This wave will focus on the post school experiences of young people providing the opportunity to analyse in detail how the outcomes of young people are shaped as they move into adulthood.

Aims and Objectives

The main aim of this PhD will be to explore those factors that influence the transition to adulthood from early childhood and the impact on career decisions. Specific objectives will be to:

- Work closely with SDS in scoping the focus of the research to ensure alignment to organisation objectives and policy relevance.
- Carry out a review of national and international literature on careers and transitions to early adulthood
- Use data from GUS to identify and explore those factors that impact on transitions into adulthood including paths to apprenticeships; occupational choices; experiences of further and higher education.
- Explore the impact of early childhood and education; household circumstances; poverty; parental influence; health; educational achievement; and geography on career transitions and decision making
- Identify the policy implications of the research for SDS and other stakeholders including the Careers Collaborative.

Research Methods

This PhD will primarily involve quantitative analysis of the GUS data set. We are also open to the inclusion of other datasets as part of the research. Policy considerations should be a key component of this PhD and reflected in the methods and plans for knowledge exchange.
Benefits and outcomes for SDS

- The PhD will provide robust data to inform our understanding of transitions of young people using a longitudinal perspective. It will provide evidence to support the work of SDS, the Careers Collaborative and other agencies.
- It will assist SDS in understanding the some of the root causes underpinning youth transitions and how we can support them as a service provider.

2. **Proposed Title:** Quantifying inequality: using large scale data sets to increase understanding of the drivers of inequality.

Background

Skills Development Scotland is committed to promoting and increasing equality of opportunity for people in Scotland who face disadvantage because of their protected characteristics or lived experience. Our Strategic Plan and Equality outcomes outline in detail our commitment to equality, diversity and inclusion. Addressing inequality is a key area for SDS – in particular supporting those individuals and areas facing the greatest challenges. It is vital that we have robust and reliable evidence to meet our commitments and effectively target our resources to those groups and areas that need the most support.

The analysis of large-scale quantitative data sets have the potential to significantly increase our understanding of some of the drivers of inequality. For example, identifying hidden inequalities; the ability to carry out intersectional analysis; local level analysis; granular analysis - on race and disability; the potential for forecasting and modelling.

Aims and Objectives

The main aim of this PhD is to increase our understanding of the drivers of inequality through analysis of large-scale data sets. Specific objectives would be to:

- Work closely with SDS in scoping the focus of the research to ensure alignment to organisation objectives and policy relevance.
- Carry out a review of national and international literature on inequality in relation to skills, work and education.
- Identify and suggest datasets for the research such as Understanding Society; the Labour Force Survey; the Scottish Census and others. We would be open to applicants considering the potential of using big data in the scope of the research. There may also be the opportunity to access SDS datasets.
- Carry out analysis of identified datasets to increase our understanding of inequality with a focus on drivers of inequality; intersectional analysis; granular analysis; and identifying any hidden inequalities.
- Identify advanced quantitative techniques for understanding inequality and the application in non-academic contexts.

- Expand the evidence base on those areas where there is currently limited evidence in relation to inequality.
- Work with SDS to identify the policy and practice implications for the research and any actionable insights.

Research Methods

This PhD will primarily involve the quantitative analysis of datasets. We are keen for proposals to suggest relevant datasets and quantitative techniques. Policy considerations should be a key component of this PhD and reflected in the methods and plans for knowledge exchange.

Benefits and outcomes for SDS

- The research will inform our understanding of inequality which is a key area of focus for SDS in relation to policy, practice and service design. By identifying the most disadvantaged groups and areas the research has the potential to assist in targeting resource.
- Inform our work on equality diversity and inclusion in SDS based on robust evidence.

3. Proposed Title: The role of generative artificial intelligence in careers guidance

Background

Generative AI is a branch of artificial intelligence concerned with the creation of new content from disparate, existing, large datasets. Generative AI can create text, image, music, videos and computer code. Generative AI provides an opportunity to speed up existing processes (synthesis of existing text and data, writing computer code) alongside generating new content for consumption by service users. Preliminary research in this area suggests that generative AI has a role to play in the provision of career advice and supporting careers services. A PhD in this area would help SDS gain a deeper understanding of the potential of AI.

Aims and Objectives

The main aim of this PhD would be to support SDS in understanding the potential contribution of generative AI in supporting careers services. Specific objective would be to

- Work closely with SDS in scoping the focus of the research to ensure alignment to organisation objectives and policy relevance.
- Carry out an extensive review of national and international policy and academic literature on generative AI and how it relates to careers services. Including reviewing the use of generative AI across careers guidance services elsewhere.
- Outline the features of generative AI and its potential.
- Summarise the proposed careers guidance service offer in Scotland.
- Gather views on the opportunities and challenges from generative AI from a range of individuals and stakeholders.
- Provide an outline of areas where generative AI could support careers guidance, identifying any risks or issues.

Research Methods

We are open to suggestions to methodological approaches. Our current view is that this topic would benefit from a mixed method approach. This could include analysis of secondary data sets; consultation with practitioners and key stakeholders; and a small number of case studies. Policy considerations should be a key component of this PhD and reflected in the methods and plans for knowledge exchange.

Benefits and outcomes for SDS

- The PhD will provide an independent, robust assessment of the opportunities afforded through generative AI. It will provide evidence to support the work of SDS, the Careers Collaborative and other agencies.
- It will provide a firm basis for SDS and the wider Careers Collaborative upon which to identify suitable pilot projects in generative AI.

4. Proposed Title: Skills for the future: upskilling and reskilling as a response to technological disruption and workforce transformation.

Background

Scotland has a skilled population with a track record for innovation and adaptability. However, Scotland faces a number of potential disrupters from technological and demographic change though automation, AI and digitalisation alongside an ageing population and high rates of economic inactivity across the working age population. The skills system needs to adapt to meet these challenges if Scotland is to remain competitive.

One way to respond to these changes is through **upskilling and reskilling** the workforce to harness the potential of technological change whilst minimising the harm to some workers. Many strategies have been suggested to address these challenges including investment in life-long learning; adapting qualifications; focusing on metaskills; and increasing digital literacy. However, there is limited evidence on how effective these strategies are and how they need to be adapted for different individuals. A PhD in this area would contribute to this knowledge base and help identify what effective strategies could look like and where to focus them.

Aims and Objectives

The main **aim** of this PhD would be to develop an in-depth understanding of the challenges and opportunities presented by upskilling and reskilling in Scotland. Specific **objectives** would be to:

- Work closely with SDS in scoping the focus of the research to ensure alignment to organisation objectives and policy relevance.
- Carry out an extensive review of national and international policy and academic literature on upskilling and reskilling.

- Identify and understand what jobs will look like in the future: how will current jobs be transformed; what jobs will change, or decline; what new jobs will be created; what skills will be needed; and what sectors will be most impacted.
- Identify future key sectors and skills.
- Identify the key challenges to upskilling and reskilling for employers, government and individuals.
- Identify and evaluate the most effective strategies to upskilling and reskilling. Examples here include the role of lifelong learning; flexible approaches to learning; exploring different types of qualifications for the future such as micro-credentials and recognition of prior learning; embedding metaskills in the workplace and workforce; improving digital literacy; supporting employers and workers to be flexible, adaptable and resilient to change.

Research Methods

We are open to suggestions to methodological approaches but consider that this topic would benefit from a mixed method approach. This could include analysis of secondary data sets; consultation with employers and key stakeholders; case studies. We are open to proposals focusing a particular sector, or population as long as this is evidence led. Policy considerations should be a key component of this PhD and reflected in the methods and plans for knowledge exchange.

Benefits and outcomes for SDS

- An in-depth understanding of the key challenges to upskilling and reskilling in the Scottish context.
- Being able to identify 'what works' in relation to upskilling and reskilling and how this can be utilised in practice.