

# A sequential explanatory methodology for the study of young people's career information literacy and career information behaviours

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**Abstract.** In the information-rich post-pandemic employment environment, young people's career success is predicated on the extent to which they can apply career information to their career decision-making and career development learning processes. Taking heed of the critical importance of career information in career decision-making, the focus of the doctoral work presented in this poster is the identification of means of enhancing young people's career information literacy competencies. To this end, a mixed methods, sequential explanatory research design is employed in the research. The programme of research consists of two phases: a quantitative phase and a qualitative phase. In the quantitative phase, knowledge of the everyday career information behaviours of Scottish adolescents will be generated. In the qualitative phase, the career information literacy practices and current levels of career agency of young people will be explored. Once obtained, research findings can inform the development of a career information literacy framework.

**Keywords:** *information literacy, information behaviour, career, employability*

## 1 Introduction

In the current labour market, learners and jobseekers are faced with a number of challenges. While career precarity and career indecision hindered the career development of young people long before the COVID-19 outbreak in 2020, career precarity is now further exacerbated, with young people subject to diminished educational and work experience prospects at the earliest stages of their career (Akkermans et al, 2020; Maree, 2021).

There is a general consensus amongst career researchers and career practitioners that young people's career decision-making should be supported by the delivery of career education programmes and the development of career management skills in individual decision-makers (Bridgstock, 2009; Moote & Archer, 2018). In addition, policymakers in the UK and Scotland have been responding to career precarity trends by seeking to

address skill shortages for high-demand occupations, and to facilitate lifelong career learning through the provision of timely and relevant career information (DfE, 2021, p.5; Scottish Government, 2020).

However, while there exists a host of interventions that seek to improve the career outcomes of young people, very little is known about their subjective experiences of navigating rapidly evolving career environments. According to research originating outwith Library and Information Science (LIS), career decision-making and career development learning are complex and integrative processes shaped by a large number of internal factors and external influences (e.g. Gunz, 2009; McMahan & Patton, 2018, pp. 107-108). Nevertheless, the informational determinants of career decision-making and career development learning are currently not well understood. These determinants constitute the gaps in knowledge that this interdisciplinary research seeks to address.

## **2 Research overview**

### **2.1 Research rationale**

The rationale for pursuing this programme of research is supported by the identification of several gaps in extant knowledge. One relates to career information literacy (IL), and another to career information behaviours (IB). With reference to the former, it is evident that employability IL scholarship does not incorporate an individual career lens, especially in the context of self-directed career development, agency, and choice (Milosheva, 2021a). With reference to the latter, it is observed that very few researchers have surveyed young people's career information behaviours (e.g. Julien, 1999; Hultgren, 2009; Stonebraker et al, 2019). Furthermore, only one researcher – Julien (1999) – has associated information behaviours with career decision-making. Therefore, career-centric research is scant in LIS. Equally, information-centric research is rarely found in disciplines that are concerned with career decision-making. The most sizeable bodies of knowledge pertaining to career decision-making and career development learning are found in Career Studies, yet the role of information use within them has not yet been emphasised (Jenkins & Jeske, 2017, p.4; Milosheva et al, 2021b). Accordingly, there is an opportunity to conduct interdisciplinary research that can designate both the notions of career and information use as central research objectives.

There is initial evidence to suggest that young people's career decision-making difficulties may be rooted in their access to, and use of, career information, and that they may benefit from developing career information literacy competencies. Firstly, students find that they have to inquire individually from multiple institutions or information databases in order to ensure comprehensiveness, continuity, and personalisation of information (Herndon, 2012, p.66). Secondly, young people report cognitive overload due to an inability to make sensible comparisons between numerous competing options (The Careers & Enterprise company, 2016, pp.4-10; Hutchinson & Dickinson, 2014, p.261). Thus, two elements appear to determine the effectiveness of young people's use of career information: (1) the quality and accessibility of external informational structures and (2) young people's proficiency in filtering and evaluating incoming

information relative to their individual career goals and interests. The subject of this doctoral work is the latter. Here, the development of career information literacy competencies in young people is expected to be crucial to the evaluation of career information.

## 2.2 Research objectives

The generation of knowledge of the means by which young people seek and encounter career information, as well their current levels of career information literacy agency, is an important first step towards the development of effective socially and digitally mediated career support systems. The production of such knowledge is considered a viable precursor to the enhancement of the IL capabilities of young people because of the close conceptual linkages between IL and information behaviours. IB represents information seeking relative to information sources, whereas IL relates to the information literacy skills qualifying the use of information sources (e.g. Madden, 2014; Pinto & Sales, 2007). Therefore, the development of insight into individuals' IB is an inseparable part of the design of IL resources, courses, and interventions (Limberg & Sundin, 2006; Sales, 2008; Shenton & Hay-Gibson, 2011; Steinerová, 2016).

In this doctoral research, the manifestations of everyday career information behaviour and career information literacy will be explored. These will be united under the common designation of 'information practices' which situate skills, attitudes, goals, and information behaviours in an everyday, socio-cultural context (Lloyd, 2011, p.285; Whitworth, 2020, p.4). This 'information practice' approach departs from the generic IL skills discourse, which is associated with formalised IL assessment and teaching practices (e.g. Lupton & Bruce, 2010; Purnell et al, 2020). As such, it represents a shift towards mapping the lived experiences and meanings at the individual and community level (e.g. Lloyd, 2013, p.6). Furthermore, it is an approach that is particularly well-suited to the study of everyday life information-seeking (ELIS) and IL in everyday settings (e.g. Savolainen, 2010; Martzoukou & Sayyad Abdi, 2017).

In line with this study's lived experience focus, the enhancement of young people's career information literacy is anticipated to be qualified by principles of self-management, self-directed learning, social learning, and innovative means of IL evaluation and assessment (e.g. Ladell-Thomas, 2012, p.380). Accordingly, the socially situated manifestations of career information literacy are recorded across a range of settings and tasks. In addition, career information needs, patterns of career information use, and career information literacy competencies are defined according to the perceptions of young people and those who form their wider social support network and influence their career decision-making. These include teachers, parents, and career practitioners.

Thus, the doctoral research employs the following research questions:

**RQ1.** How do young people utilise career information for the purpose of making career decisions about the varied training, education, and work experience opportunities available to them?

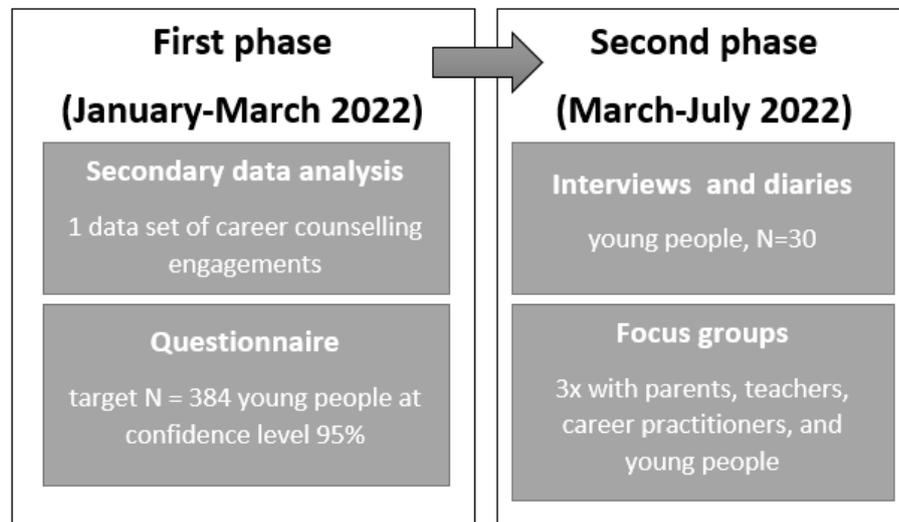
**RQ2.** Which career information literacy competencies can be developed in young people for optimal career development learning and career decision-making?

### **3 Research design**

The programme of research for this doctoral work employs a mixed methods, sequential explanatory design that consists of two phases: an initial quantitative phase and a consecutive qualitative phase (Figure 1). While both phases address both research questions, the quantitative phase corresponds more prominently to RQ1 on career information behaviour. Meanwhile, the qualitative phase is more closely associated with RQ2 on career information literacy competencies. The main benefit of utilising such a design for the study is that it is particularly useful in cases where the researcher wishes to generate rich and multi-layered explanations about the subject of study (e.g. Teddlie & Tashakkori, 2009). An additional benefit is that the interpretation of findings from the quantitative phase can inform the approach taken in the qualitative phase. In turn, findings from the qualitative phase allow for the triangulation and corroboration of claims from the quantitative phase (e.g. Edmonds & Kennedy, 2017). Here, the quantitative data provides a general understanding of the research problem, and the qualitative data provides support, context, and explanatory utility for the previously obtained results (Ivankova et al, 2006, p.4).

Both phases of the research will be conducted in close collaboration with Skills Development Scotland (SDS). SDS is Scotland's leading careers and skills agency, and enacts career guidance policies on behalf of the Scottish Government. It is also one of the sponsors of this doctoral study.

The primary target population for the research will be young people aged 12-18, resident in Scotland, in the process of choosing an occupational path, and preparing for their lives beyond school education. The secondary target population will be members of young people's career support networks. These will include parents, teachers, and career practitioners. Data will be collected between January and July 2022 using a total of five research methods: secondary data analysis; questionnaire; interview; diary; and focus group. A timetable of the recruitment and data collection activities for both research phases is provided below (Table 1).



**Figure 1.** Mixed methods approach: sequential explanatory design

**Table 1.** Research timeline

	Time period	Action or method	Steps taken
<b>Preparation</b>	October – November 2021	<b>Ethical review</b>	<ul style="list-style-type: none"> <li>ethical approval sought from host university</li> <li>development of data management plan</li> <li>review of ethical guidance on conducting research with young people</li> </ul>
		<b>Participant recruitment</b>	<ul style="list-style-type: none"> <li>negotiations with existing gatekeeper contacts</li> <li>identification of new gatekeeper contacts and direct recruitment of young people</li> <li>creation of an online presence for the project</li> </ul>
<b>First phase</b>	November 2021 – January 2022 (First phase)	<b>Secondary data analysis</b>	<ul style="list-style-type: none"> <li>internal SDS audit of relevant databases</li> <li>evaluation and selection of appropriate secondary data sources following internal SDS audit</li> </ul>
		<b>Questionnaire</b>	<ul style="list-style-type: none"> <li>development and administration of pilot questionnaire</li> <li>refinement of questions and administration of final questionnaire</li> </ul>
<b>Second phase</b>	<i>Preliminary data analysis (to inform second research phase)</i>		
	January 2022 - July 2022 (Second phase)	<b>Interview</b>	<ul style="list-style-type: none"> <li>concurrent data collection via interview and diary</li> <li>data collection to take place in-person or online depending on availability</li> </ul>
		<b>Diary</b>	
	<b>Focus group</b>	<ul style="list-style-type: none"> <li>exploration of co-constructed nature of career information literacy</li> <li>co-creation of avenues for embedding career information literacy support mechanisms into existing practice</li> </ul>	
<i>Final data analysis (of data collected in both phases)</i>			

In the absence of sufficient primary research into young people's career information behaviour and career information literacy, secondary data analysis will be employed in the first phase of the research. The use of secondary data in research is particularly fruitful when some practice-based data on the phenomenon under investigation already exists (Vartanian, 2010, pp.18-22). Secondary data will be obtained from SDS, and this is anticipated to yield highly relevant results, as there is abundant practice-based knowledge about career information use within career services (e.g. Gysbers et al, 2003; Sampson et al, 2008, p.28). Questionnaires are well-suited to the study of information behaviour in general, and adolescents' career information-seeking in particular (e.g. Pickard, 2013; Julien, 1999), hence a questionnaire will also be deployed as part of the first phase of the research design. The questionnaire will be developed from the quantitative analysis of the secondary data analysis and the literature review completed in Year 1 of the PhD. It will be used to supplement the resource usage statistics obtained from the secondary data analysis by generating knowledge of the career information behaviour patterns of young people relative to common information sources. It is anticipated that the first phase of the research will be completed prior to the iConference in February 2022.

It is important to note that the first phase of the research will not be sufficient to capture the lived experiences of young people as it relies almost exclusively on quantitative research methods. It is therefore crucial to implement a qualitative phase into the research. The value of doing so is well-illustrated by Stonebraker et al's (2019) qualitative study of undergraduate students' information use at the career fair. By focussing on the lived experiences of students, Stonebraker et al (2019, p.360) found that students saw themselves in one of three roles – 'navigator', 'performer', or 'aligner'. Had the researchers employed an entirely quantitative approach, they may have produced more knowledge about the actions performed relative to information sources than the motivations and competencies that underpin them. From this point of view, each of the students surveyed may have appeared to have completed a similar set of actions (e.g. speaking to recruiters or perusing brochures), and their varying motivations and strategies for engaging with recruiters may not have been captured in full detail. For this reason, a qualitative phase will be implemented into the doctoral work in February 2022.

While qualitative data collection techniques such as interviews, observations, diaries, and focus groups are commonly used in information research (Pickard, 2013), a combination of interviews and diaries provides the most in-depth account of personal experiences and meanings linked to everyday life events (Spowart & Nairn, 2014, p.329; Cao & Henderson, 2020, p.1). The use of diaries is also emphasised in career decision-making research and applied careers practice. Not only is career decision-making an individual pursuit that is dependent on subjective meanings, values, goals, and identity development processes, but reflection and writing are two of the most salient ways in which career development planning can be expressed in practice (Ceschi et al, 2016, p.9, Hansen, 2019). Nevertheless, it might be simplistic to view career decision-making as an entirely individualised process. Career decision-making is shaped by social exchanges and relational processes, hence societal constructions and the influence of external actors on individual career decisions should be accounted for in

research as well (e.g. Duffy & Dik, 2009). These relational aspects of lived experience can be captured via focus groups or ethnographic methods (e.g. Halkier, 2010; Ocepek, 2018).

In congruence with the analysis reported above, a case study approach will be utilised in the second phase of the research. The ways in which young people define their IL competencies and navigate multi-modal information landscapes in everyday life will be examined via a combination of interviews, diaries, and focus groups. Interviews and diaries will produce knowledge of individual effects, whereas focus groups with young people, career practitioners, parents, and teachers will map the relational, negotiated, and socially situated nature of career information use. An additional benefit of using focus groups in the research is their knowledge co-production aspect, which is expressed both via existing understandings and via the emergence of new shared understandings (Morgan, 2012, pp.163-164). Thus, focus groups will be conducted with two objectives in mind: to investigate existing understandings of career information literacy and to co-construct strategies for embedding career IL support mechanisms within schools and career services.

## **4 Conclusion**

In this poster, a comprehensive and integrative methodology for the study of young people's career information behaviour and career information literacy is presented in the form of a sequential explanatory design. The application of this research design allows for the methodological consolidation of information behaviour and information literacy as it captures both information use patterns relative to information sources, as well as subjective and socially situated enactments of career information literacy competencies.

By virtue of its integral triangulation properties, the research design is methodologically robust, and can be applied to the exploration of under-researched phenomena. In addition, the combination of several qualitative methods within the second phase of the design allows for the investigation of both individual and relational aspects of career information use patterns. It is anticipated that the results produced via the utilisation of the sequential explanatory research design described in this poster will contribute to the enhancement of young people's career information literacy competencies.

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