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Young People's Career Information Literacy: Three Essential Skills for Decision-Making

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Abstract

Career decision-making depends upon the effective access and use of career information. In this paper, the findings of a qualitative study on the career information literacy skills among Scottish secondary school students are presented. Data were collected through semi-structured interviews (N=33) and diary studies (N=12) with Scottish secondary school students aged 13-18. Interview transcripts and diary entries underwent systematic thematic analysis using NVivo 11, with close attention paid to the career information literacy skills used for the purposes of career decision-making. Three distinct clusters of competencies are found essential for career information literacy: (1) digital skills, (2) social skills, and (3) resilience. Of these, resilience is especially crucial for sustained engagement with career information. The main contribution of the work is to extend conceptualisations of career information literacy. This is achieved in the development of a tripartite conceptualisation of essential information literacy skills in the context of career decision-making.

Keywords: career information literacy; career decision-making; young people; post-secondary school transitions

Introduction

Career information literacy represents a novel area of interdisciplinary enquiry which applies a concept originating from Library and Information Studies – information literacy – towards the understanding of the skills needed for career decision-making. The work presented here addresses the intersection of information literacy and career, with particular attention paid to the practical skills that facilitate informed career decision-making. Understanding how young people utilise such skills during the career decision-making process provides

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valuable insights into the development of career agency within increasingly challenging and information-rich career landscapes. For the purposes of this study, career information literacy will be defined as 'the skills needed for effective career information seeking and informed career decision-making'.

This paper is structured as follows. First the context of the research is given. This includes an examination of the importance of information literacy in career development, and the identification of a gap in the understanding of the career information literacy in young people within published research. Presented next is the approach adopted for the empirical study from which three emergent competency clusters are identified: (1) digital skills, (2) social skills, and (3) resilience. A synthesis and evaluation of the main findings follows. The paper concludes with a proposed tripartite conceptualisation for understanding career information literacy. This offers a conceptual contribution to the field, as well as points to practical implications for career guidance.

Background

Information literacy – the ability to find, evaluate and use information effectively – is key in enabling citizens to make balanced judgements and develop informed views (Secker, 2018). Recent years have seen growing recognition that information literacy also plays a vital role in career development. This review synthesises relevant literature from Career Studies and Information Science to examine how information literacy intersects with career decision-making and development.

The Importance of Information Literacy in Career Development

Career decision-making is one of the most popular research topics in Career Studies, and one which has been marked by clear historical progression and differentiation according to schools of thought (as shown by the bibliometric studies of Lee et al, 2014; Martincin & Stead, 2015). For instance, while early theoretical approaches emphasised rational matching of traits to occupations (Parsons, 1909), contemporary scholars recognise decision-making as a complex endeavour shaped by multiple factors. Perhaps most notably, Hodkinson's Careership theory (Hodkinson, 2009) – inspired by Bourdieu's Habitus theory (Bourdieu, 1983) – posits that career decision-making is enabled or constrained by people's horizon for action. Within this horizon for action, decisions are guided by people's subjective experiences, interactions, and perceptions (Hodkinson, 2009). Family expectations, life circumstances, and spiritual factors can exert a significant influence on career choices (Duffy & Dik, 2009). In addition, there exist descriptive conceptualisations of the career decision-making process, whereby career decisions are made on the basis of the influence of contextual and serendipitous factors, rather than on the basis of rational assessments of one's skills and traits to specific careers (Krieshok, 1998; Hartung & Blustein, 2002). These align with constructivist perspectives which emphasise that career identities are subjectively constructed through lived experiences and relationships (Kang et al., 2017). By extension, serendipitous social interactions with family members, career practitioners, and school staff can shape young people's career intentions (Chin et al, 2019; Griffin et al, 2011; Zondag & Brink, 2017).

One key contextual factor that influences career decision-making is the availability of formal information (e.g. print-based or digital information) and informal information obtained from other people (Greenbank, 2014; Jenkins & Jeske, 2017; Mowbray & Hall, 2020). Although information seeking behaviour has received limited attention in the career development literature, extant research suggests that young people need to be equipped with the ability to access and interpret relevant career information (Fonseca & Chatzichristou, 2018; Pesch et al., 2018). For instance, Kelly and Shin (2009) find that students may experience a

lack of career information, and Hutchinson and Dickinson (2014) observe that career information landscapes often comprise multiple disconnected sources that can cause cognitive overload and decision paralysis. The availability and utilisation of career information is closely related to young people's cognitions and metacognitions for the purposes of decision-making, as exemplified by Sampson and colleagues' Cognitive Information Processing (CIP) theory (Sampson et al., 2020). The CIP theory posits that two types of knowledge need to be developed for effective decision-making: knowledge of one's own preferences and aptitudes and knowledge of the world of work (Sampson et al, 2020). Career information thus underpins both occupational knowledge and career cognitions.

The literature also highlights growing recognition that specialised skills are needed to navigate digital career information effectively. Hooley (2012) advocates for greater attention to digital literacy, while Sultana (2012) positions career management skills as competencies for gathering and analysing career-related information. However, the specific information skills required for career decision-making in the digital age remain underexplored. While early research on the topic highlighted the new opportunities afforded by internet-based career systems such as O*NET (Bhatnagar, 2018; Brown, 2003; Maguire & Killeen, 2003; Peterson et al., 2001; Sampson Jr et al., 2003), modern research is more concerned with the implications of technological developments for the career guidance profession (Attwell & Hughes, 2019; Bimrose et al., 2015; Borbély-Pecze, 2020).

Of particular prominence are the recent papers by Hooley (2012; 2017) and Staunton (2018), which grapple with the question of applied practice. Upon observing individuals' interactions with digital tools and platforms in career contexts, Hooley (2012) introduced the "Seven Cs" framework of digital career literacy comprising Changing, Collecting, Critiquing, Connecting, Communicating, Creating and Curating components. In doing so, Hooley recognised that the internet is fundamentally reshaping how careers are enacted and navigated, and later also reflected on the growing recognition of digital career management as a core professional competency (Hooley, 2012; Hooley, 2017). Building upon this narrative, Staunton (2018) reflected on Hooley's Seven Cs of digital literacy and offered a critical response through the lens of New Literacy Studies (NLS). He argued that while the term 'digital career literacy' implicitly encompasses knowledge, skills, and attitudes, there remains a risk of conceptualising literacy in isolation from social contexts and thus overlooking the socially constructed nature of digital literacy itself. In addition, an inductive approach to digital career development should be employed and based on "how people actually experience the internet" (Staunton, 2018, p.51).

Thus, there remain open questions not just regarding the appropriate information literacy skills to be fostered in young people, but also about the enactment of context-specific and real-world – whether individual or communal – literacy practices. The role of motivation and attitudinal dimensions in career information seeking and career information literacy may also be pertinent in real-world information seeking situations (e.g. Dubnjakovic, 2018; Lo & Chu, 2015). Hooley (2012) and Staunton (2018) recognise the fundamental reshaping of career development by digital technologies and the need for theoretical frameworks to understand this transformation. This suggests that there is a need for research to investigate career information literacy whilst recognising the increasingly blurred boundaries between online and offline career management activities.

Career Information Literacy Research

Despite the longstanding integration of career preparation within higher education

(Jones & Seybold, 2016; Reader et al, 2020; Stonebraker & Fundator, 2016), a literature search for the combination of the keywords 'career' and 'information literacy' yields only a small number of papers across Career Studies and Information Science. Of the few contributions on career information literacy that exist, the earliest originate from Career Studies (Hollister, 2005; Zalaquett & Osborn, 2007), whereas the most recent ones come from Information Science (Arur & Sharma, 2022; Hamlett, 2021) and Education (Lin-Stephens et al., 2018, 2019; Valentine & Kosloski, 2021).

This emerging research on career information literacy offers promising directions for further research and practical impact. Within Career Studies, Hollister (2005) documented a university library-careers service collaboration that integrated information literacy into career planning curricula, and Zalaquett and Osborn (2007) detailed the development of careers-focused digital resources and coursework for counselling postgraduates. In the disciplines of Information Science and Education, Hamlett (2021) chronicled the collaborative integration of information literacy instruction into a compulsory careers module, and Lin-Stephens et al (2019) presented an institutional case study of embedded career information literacy.

Valentine and Kosloski (2021) distinguish their work by presenting a conceptual analysis of career information literacy through a four-round Delphi study that engages career experts. Their research identified and classified fifty distinct skills into functional, interactive, and critical competencies, with the ability to interpret diverse information formats being the most crucial of these. Similarly, Arur and Sharma (2022) adopted a more critical stance, examining the power dynamics inherent in information literacy practices, and the different legitimacy accorded to various information sources. Their investigation of male Indian secondary school students revealed a preference for Internet-based resources alongside a high attribution of cognitive authority to individuals with direct career expertise.

This body of research on career information literacy provides a rich set of competencies and contextual factors to consider, but it does not provide a clear focus for research to inform career development practice. This need underpins the research question employed in this paper: Which career information literacy skills qualify the quest for information relevant to young people's career decision-making?

This research question responds to a gap in the literature concerning both the practices enacted within real-world settings (e.g. Staunton, 2018) and the competencies deemed essential and valuable in increasingly digitised career landscapes (e.g. Hooley, 2012; Hooley, 2017). To guide the enquiry, this paper adopts an operational definition of career information literacy, understood as "the skills needed for effective career information seeking and informed career decision-making." This context-specific investigation examines and elucidates the extent to which the skills identified in the literature are enacted in practice by Scottish secondary school students aged 13-18.

Methods

The findings presented here derive from the qualitative phase of a broader investigation of the career information literacy of Scottish young people (Milosheva, 2024). The full programme of research employed a mixed-methods sequential explanatory design that incorporated secondary data analysis, questionnaires, interviews, and diary studies. This paper is concerned with the findings derived from the analysis of qualitative data gathered through semi-structured interviews and participant diaries in the third and fourth phases of data collection. This focused analysis allowed for deep exploration of participants' lived experiences of career information literacy, and for a detailed examination of

the complex interplay between information literacy competencies and career decision-making processes.

Participant Sample and Recruitment Partners

The primary target population comprised young people aged 13-18 years, resident in Scotland, and attending Scottish state secondary schools. Ethical approval for the research was granted from Edinburgh Napier University, Scotland. The investigation was conducted in collaboration with two significant Scottish youth-focused organisations. The first is Skills Development Scotland (SDS), which is Scotland's public career service, providing guidance to school pupils that is free at the point of delivery. It delivers career information, advice and guidance services to support young people's vocational, educational and occupational transitions. The expectation was that the research findings from the broader research to which the study reported here would inform enhancements to SDS's service provision, particularly that related to career information literacy support within educational settings.

The second collaborative partner was YoungScot. YoungScot is a national youth information and citizenship charity that serves Scotland's population of 11-25 year olds. The YoungScot programme connects young people with volunteering opportunities aligned with their interests. As participants volunteer their time and engage with various causes (in this case, taking part in research), they earn points through the programme. These points can later be redeemed for different rewards, including digital vouchers for services like gym memberships, as well as experiential rewards such as zoo visits or career-focused opportunities like work shadowing. It was anticipated that the points-based system may potentially act as an incentive and influence participant motivation, such that it may prompt reward-seeking behaviour instead of genuine participation. To mitigate this, the points system was presented as a form of recognition and compensation for participants' time and effort, and not as a gamified or transactional exchange. This mirrored the messaging commonly used in relation to participant remuneration in research, thereby aligning the awarding of points with the widely accepted practice of compensating individuals for their involvement.

Research Instruments

Two research instruments were deployed in the study. First a semi-structured interview protocol for administration online over Microsoft Teams was developed to gather data on participants' experiences of accessing, using, evaluating, and sharing careers information. The interview protocol was designed to investigate participants' conceptions of career information literacy across various contexts and modalities. Open-ended questions prompted participants to contextualise their accounts through detailed explorations of the temporal, spatial, procedural, motivational, and social dimensions of information literacy. For example, the young people were asked to respond to a question that was phrased "Tell me about the last time you looked for career information – what were you looking for and how did you go about doing this?". The interview protocol included both broader exploratory questions and an adapted 'interview to the double' technique (Lloyd, 2014). The latter invited participants to articulate the means by which they would guide peers through specific career information seeking tasks.

The second instrument required participants to complete follow-up diaries with prompts to encourage documentation of information seeking-strategies undertaken over a period of three weeks. This phase sought to examine previously investigated themes with enhanced granularity, and to facilitate deeper understanding. The structure of the diary protocol comprised three distinct elements designed to undercover cognitive strategies in career information seeking (Table 1).

Table 1.
Themes and Codes

Diary	Structure	Excerpt of the request sent to the participants
Diary one	The first diary focused on two specific careers – chef and paramedic – which were deliberately chosen because participants had previously mentioned researching these professions. This required participants to compare different career options and engage in decision-making processes, reflecting real-world career exploration scenarios.	*Please explain, step-by-step or in as much detail as possible, where and how you looked for information about Emma's career options.* *In 1-2 paragraphs, please report on what information you found during your search.*
Diary two	The second diary centred on forensic psychology, specifically selected because interview participants had identified it as a challenging field to research. This choice was strategic, designed to observe how participants approached and navigated difficult information-seeking tasks.	*What does a forensic psychologist do and what is their average salary?* *In 1-2 paragraphs, please describe where and how you looked for the information above.* *What sorts of skills did you draw upon in order to find the information?*
Diary three	The third diary took a notably different approach, incorporating creative writing exercises. This decision was grounded in methodological research by scholars like Fargas-Malet et al. (2010), who demonstrated that innovative and creative research methods are particularly effective with younger participants.	*Please write 300-500 words on one of the following topics:* *A column for your school's magazine explaining how one can research careers,* *2. A letter to your past self, explaining how to research careers* *A piece of creative writing in any format that you would like that makes reference to careers research and career information*

The diary study methodology was carefully structured to investigate how young people search for and process career information. The design incorporated both practical scenarios and creative elements, built upon participants' actual experiences from the interview phase. The first two diary prompts, in particular, drew significant inspiration from Zalaquett and Osborn's (2007) research on career counselling students. Their study used scenarios (vignettes) where students needed to find precise career information based on specific requirements (e.g. geographical location).

Data Collection and Data Analysis

Thirty-three young people (M=10, F=23; average age = 15.6, age range = 13-18) took part in the semi-structured interviews, and twelve participated in the follow-up diary exercise. The average interview length was 35 minutes. The diary entries varied in length from 145 to 1137 words, with 382 as the average word count. The sample of participants was devised by

approaching young people who had previously completed a questionnaire as part of the same project, and who had indicated that they would be willing to participate in follow-up research. Whilst the full sample of questionnaire participants was intended to be representative of the population, this purposive recruitment method was chosen specifically for its utility in identifying engaged participants who would be likely to persist with the research. This was seen critical to the success of the diary study, in particular, as it required continued engagement over several weeks.

The interview transcripts were automatically generated by Microsoft Teams and subjected to rigorous manual verification and correction. The diary entries were exported from Microsoft Forms and systematically checked for completeness. Both datasets were anonymised using randomised pseudonyms, then subjected to an analysis process using NVivo 11. The thematic analysis followed established qualitative research principles such as inductive coding, deductive coding, and cycles of coding (e.g. Skjott Linneberg & Korsgaard, 2019), and progressed through four stages, which are demonstrated with an illustrative example in Table 2.

1. Initial data familiarisation and preliminary code generation.
2. Exploratory theme identification.
3. Detailed transcript analysis and hierarchical coding development.
4. Theme and code refinement and pattern identification.

Table 2.
Illustration Of Coding Process

Coded excerpt from a participant's diary	Four-stage coding
"…[a] way to find out more information on a certain field is to ask people who have a job in that respective field that could be a teacher, family friend or just someone you meet who happens to work in that field."	**Preliminary code**: '*asking people for information*' Theme identification: part of '*information seeking*' theme? **Hierarchical coding**: code renamed to '*socially mediated information seeking*' and filed under '*information seeking*' theme **Theme refinement**: code '*process and digitally mediated information seeking*' and code '*socially mediated information seeking*' both filed under theme '*career information seeking*' as both refer to different modes of accessing career information

The full programme of research, from which the findings pertaining to career information literacy was derived, produced four higher-order themes and twelve codes (Table 3). These were reviewed by the research team for the purposes of ensuring accuracy and consistency, verifying the themes against coded excerpts, and refining the coding or introducing sub-codes as needed. This process of review and refinement was designed to enhance the credibility and trustworthiness of the analytical framework, ensuring that the themes authentically represented participants' experiences and that the findings demonstrated sufficient transferability to comparable contexts (e.g. Braun & Clarke, 2006).

Whilst themes such as "Context" and "Emotion" provided important contextual foundations, they were excluded from the present analysis due to their scene-setting rather than skills-focussed orientation. Conversely, sub-codes pertaining to information seeking – such as "Process and digitally mediated information seeking" and "Socially mediated information seeking" – demonstrated close conceptual alignment with the skills detailed in the "Career information literacy" theme and were therefore incorporated into the analysis. The information seeking process was seen as useful to illustrating the practical deployment and underlying rationale for the skills identified in the analysis.

Table 3.
Themes and Codes

Higher-order themes	**Career information seeking**	**Career decision-making**	**Career information literacy skills**	**Career information literacy support**
Codes for each theme	Information sources	Decision-making criteria	Digital skills	Current provision in schools
	Process and digitally mediated information seeking	Information management	Social skills	Preferences for future provision
	Socially mediated information seeking	Career development learning	Resilience	
	Context	Meanings of 'career'		
	Emotion			
	Challenges			

Findings

Three distinct clusters of competencies essential for career information literacy were generated from the analysis of the interview and diary data: (1) digital skills, (2) social skills, and (3) resilience.

Digital Skills

Digital skills were frequently conceptualised by the participants as foundational information handling and analytical skills. This suggests a sophisticated understanding of information processing is required to be career

information literate. For example, Neil said at interview:

You do need skills in information handling, of course. To me, information handling is understanding layouts of certain information regarding a topic and understanding what it means and what it's detailing. (Neil, 16)

This observation reflects the cognitive complexity inherent in career information processing during which individuals must simultaneously decode, interpret, and synthesise multiple information streams. In addition, the digitally-mediated nature of contemporary career exploration necessitates robust digital literacy, as identified by Eryk:

You need a good knowledge of the Internet and being able to research. (Eryk, 13)

Eryk confirmed this view when writing in his diary:

It is very important to have good researching skills whilst doing this research. Knowing what to search will really help your results. (Eryk, 13)

Furthermore, successful information acquisition requires clearly defined parameters and objectives, i.e. a form of search intention clarity. Emily expressed this in her interview:

I think you… really need to have an idea of what you're looking for: a very specific idea. And you need to know where to start, where to look. (Emily, 13)

Callum made a similar remark in his diary, highlighting the interdependence of career aspirations and effective information seeking:

The information is very easy to find if you know what you are looking for, and finding this information is a skill that will be necessary whatever you decide to do... The key phrase is 'if you know what you are looking for'. (Callum, 18)

It is evident that the information seeking process, facilitated by digital literacy skills, possesses inherent complexity, demanding systematic scrutiny and critical evaluation of information derived from diverse sources.

These findings position digitally mediated information seeking and digital literacy competencies as essential components of career information literacy within increasingly digitised career environments. They also highlight the metacognitive aspects of career information literacy where strategic planning precedes information gathering.

Several of the skills required resemble those identified by Valentine and Kosloski (2021): conducting career research; deciphering information presented in different formats; drawing inferences from the information. Of note, the digital skill component of career information literacy resembles some of the traditional research competencies utilised to support scholarly writing in formal education, but as applied to career development.
These findings carry two significant implications. Firstly, they suggest that the research skills acquired within educational contexts may be transferrable to career information seeking contexts, thereby indirectly enhancing young people's career development. Secondly, they indicate that career assignments requiring students to research and critically reflect upon career pathways could prove beneficial to enhancing their career information literacy skills and career preparedness.

Social Skills

The second cluster analysed as crucial according to the participants is 'social skills'. Here the critical importance of interpersonal characteristics in navigating career information landscapes comes to the fore. These social competencies manifest primarily as communication skills and self-assurance in approaching potential information sources, as can be seen in the following statement made by Mairi:

If you're asking people about it, you obviously need… the confidence to go and ask someone. (Mairi, 17)

This observation underscores that career information seeking is inherently social. Here young people navigate complex interpersonal dynamics across various contexts, from formal educational settings to professional environments. The information seeking-driven nature of these interactions is exemplified by Olivia's questioning as she reported at interview:

My auntie works in the hospital in the Paediatrics department and it… interested me… I obviously want to do something helping children. ... I just asked her what she did on a daily basis. (Olivia, 14)

Careers advisers, teachers, family members, family acquaintances, friends, and peers and approached for career information, as their input and lived experience is held in high regard. This effect is exemplified by Michael's reflection: *"People with experience, I think, are definitely one of the best resources you can use."*

In addition, the participants explained that socially mediated information seeking is preferrable when efficiency in obtaining answers is desired:

If I wanted to, I could spend hours on Google, trying to understand stuff watching videos and stuff, but there are like certain cases where like I'd like to speak to an architect and get like personal information. (Keith, 17)

The information obtained from interpersonal sources may prove both actionable and concrete, subsequently facilitating career exploration activities. As Molly observed:

My mom's friend, she works as a hairdresser, so she said that she would, like, take me in for a few days and like, show me how everything works. So I think that would definitely like make me research it more. (Molly, 15)

Career conversations with others, particularly parents and careers advisers, offer additional benefits in allowing young people to verbalise their research and thought processes, share the results of their search for career information, and receive personalised feedback:

And so then I can actually talk over with someone and show them what I've researched. I usually talk to my parents a lot about it. It's usually 'How far away is it' and 'Would that be right for you'? That's the kind of things that we were talking about. (James, 16)

This suggests that socially mediated information seeking has advantages that may be difficult to obtain through digital channels. It provides engaging, actionable, personally contextualised information and advice that transcends mere information retrieval to include elements of guidance. The information obtained from others can serve as either a substitute for, or supplement to, digital information. It may be particularly useful when digitally mediated information seeking proves inefficient or yields ambiguous outcomes.

The social skills applied by young people in this context include the ability to identify suitable contacts whom to approach for information, articulate and verbalise their information seeking strategies, formulate targeted enquiries, and consider the implications of the received information. Whilst the origins of these social skills, whether innate, acquired, or a combination thereof, remain unclear, they appear to be fundamentally important to the development of young people's career information literacy.

Resilience

Resilience is the third competency to emerge from this analysis. This represents an important dimension that is underpinned by several interrelated themes. All thirty-three participants mentioned resilience in

some form as essential to career information literacy. The resilience that they described is evident in qualities such as patience, persistence, and sustained commitment. This constitutes a significant finding that conceptualises resilience as encompassing both skills and attitudinal components.

Patience. Career information seeking is associated with a considerable time investment, thereby necessitating patience. For example, Adam noted:

I think you also need to be quite patient because there [are so many websites to consult]. [It] takes a while with reading. (Adam, 17)

Similarly, Mairi said in her interview:

I think you're going to need a lot of determination because it's not all necessarily just there waiting for you. You have to search a lot for it. (Mairi, 17)

Comments on the importance of resilience were also evident in the diary entries. For example, Michael wrote:

I drew upon my resilience as when it became difficult to find answers I did not give up and tried my hardest. (Michael, 16)
The complexity of information seeking varies significantly across different career trajectories, with non-traditional pathways demanding enhanced patience and persistence. Isla highlighted that the extent of search effort required varies from career to career when discussing this issue:

Sometimes it is easy: you can search… and the first result is everything you need. And in other careers you have to do a lot of digging. (Isla, 17)

Frustration Tolerance. The analysis of the data from the diaries also exposed challenges in career information seeking that related to the need to persist in the face of difficulties. A particularly salient challenge is the interpretation of educational requirements.

For example, Victoria explained in her diary that the prerequisite specifications for different qualification frameworks are unclear as she *"found it difficult to find out what subjects are helpful to becoming a forensic psychologist and the entry requirements for universities"*. Emily made comments in her diary about qualification requirements and remuneration prospects, prefacing these with a complaint about information on salary levels:

All the sources gave different answers so it was difficult to come to an average. I think I would need help with finding out which requirements I need to get into the course as I'd need to find out what exactly each qualification includes. (Emily, 13)

Eryk's experience with psychology-related job descriptions also led him to conclude in his diary that the occupational role descriptions are both vague and opaque. He thought that they were *"unclear as they never specified what you would actually do and if it was clinical or forensic psychology".*

Attention Span. While responsibility for some of these difficulties may not lie with young people, at interview, almost half of the participants in this study (N=16) reported personal deficiencies in sustained attention and meticulous research. The analysis of this data set reveals a complex interplay between the cognitive demands of searching for information and the nature of the contemporary information environment. This frustrates focus and persistence amongst young people who seek career information. For example, when interviewed Chloe admitted:

I do get quite distracted and bored. So I'll start reading it and if there's… more than 4 pages, I just stop immediately. (Chloe, 15)

James made a similar comment:

I have these other thoughts of 'I can be doing this right now' or 'I could be doing this right now'. (James, 16)

This phenomenon may simply be reflective of broader societal shifts towards rapid information processing and shortened attention spans in digital environments. Nevertheless, the self-awareness demonstrated here reveals the participants' metacognitive understanding of their personal limitations, as illustrated in the observation below made by Paul:

I'm not really the type of person to want to sit around for too long. You know, I just want to find out as soon as possible to get it out of the way. (Paul, 15)

These findings indicate a need for interventions that frame career information literacy as encompassing resilience-building alongside traditional research skills. They suggest that realistic expectations regarding the cognitive and temporal demands of career information seeking should be formed in young people, and coping strategies taught. Boredom and mundanity appear to be indelible parts of the process that information seekers may need to contend with at times and be well-equipped to handle. The variable complexity across different professional trajectories may also require advanced and contextualised preparation.

In summary, the data presented in this paper suggests that the conceptual framing of career information literacy should designate it as a multifaceted concept that extends beyond just digital skills. In practical terms, young people would be better able to meet the demands of the modern information landscape if they are equipped with more advanced digital, social, and resilience skills.

Discussion

The findings of this study illuminate the interplay between information literacy skills and career decision-making. Three essential career information literacy skills are identified: (1) digital skills; (2) social skills; and (3) resilience.

The key components of the tripartite conceptualisation of essential competencies uncovered through this research represent a core set of mutually supportive competencies. Digital skills support digitally mediated information seeking, social skills facilitate socially mediated information seeking, and resilience ensures that the quest for information, whether through digital or social means, can be sustained over time.

This tripartite schema thus encompasses both cognitive and affective dimensions of the engagement with career information and extends current conceptualisations beyond purely technical dimensions through the inclusion of resilience. Crucially, it also fulfils three additional functions.

First, it grounds taxonomies of skills in practice rather than normative prescription. Whereas existing taxonomies often present idealised and sometimes extensive inventories of skills that information seekers should possess (e.g. Valentine & Kosloski, 2021), this study examines the competencies that young people actually deploy when seeking answers to genuine career questions in their day-to-day lives. This shift from prescriptive to descriptive analysis affirms the established need for developing digital literacy skills in young people and reveals new competencies (i.e. resilience) that might otherwise be overlooked from a conceptual standpoint.

Second, the research redirects scholarly attention from the question of what motivates individuals to initiate information seeking (e.g. Dubnjakovic, 2018; Lo & Chu, 2015) towards the underexplored domain of sustaining information engagement once the process has commenced. This transforms resilience from an assumed prerequisite into an explicit conceptual domain, and as a consequence also into a learning objective with implications for career guidance.

Third, this study reconceptualises practices within information seeking contexts as embodied skills by positioning these as learnable competencies rather than merely as informal practices. For example, while

previous research has acknowledged that career information is obtained through socialisation (e.g. Jenkins & Jeske, 2017; Mowbray & Hall, 2020), this investigation reveals that effective career information seeking necessitates the deployment of specific social skills (e.g. confidence to approach others; formulating the right queries).

Digital Skills

In terms of literature alignment, the emergence of digital skills as foundational competencies echoes Sultana's (2012) conceptualisation of career management skills as abilities for gathering and analysing career-related information. Whilst the early literature had focused primarily on the dissemination of career information to users of digital systems (Brown, 2003; Maguire & Killeen, 2003), this study highlights the proactive engagement of users in information gathering. This implies that young people may benefit from not only accessing digital information but also receiving support in developing skills to actively search for and filter that information.

The relationship between career information literacy and digital competencies, highlighted by Hooley (2012), warrants further investigation, particularly given the participants' comments about online distractions. The predicted ubiquity of AI chatbots and Large Language Models warrants renewed efforts to educate young people on the opportunities and risks of using digital information sources and equip them with the appropriate skills to search the internet for information.

The digital competencies identified as crucial by the participants reflect the increasingly complex, disconnected, and digitised nature of career information landscapes as documented by others (e.g. Hutchinson and Dickinson, 2014). The emphasis on sophisticated information handling and analytical competencies suggests that career information literacy extends beyond basic search skills to also encompass higher-order cognitive and metacognitive processes. This finding thus supports Valentine and Kosloski's (2021) prioritisation of information interpretation and analysis. The participants' ability to clearly express information-gathering principles, such as having a clear search intention and planning strategically, shows a level of metacognitive awareness that can facilitate both skill assessment and the development of new skills.

Social Skills

The identification of social skills as crucial to career information literacy aligns well with constructivist approaches to career development (e.g. Hodkinson, 2009) and with Arur and Sharma's (2022) observations on the importance of social networks in career information seeking. Furthermore, the social dimensions of career information literacy, evidenced in communication skills and interpersonal confidence, appear to be critical components of socially mediated information seeking.

The information gathering-oriented nature of social interactions indicates that social networks serve not just as influences on career decisions (as documented by Chin et al, 2019; Griffin et al, 2011; Zondag & Brink, 2017) but also as active sources of occupational knowledge. The purposeful orientation of social interactions suggests a more instrumental and targeted use of social capital than previously recognised, challenging assumptions about the informal and serendipitous nature of socialisation in career development. This means that a greater emphasis in career guidance should be placed on developing the social aspect of young people's career information literacy skills.

Whilst it may be assumed that some young people naturally possess the interpersonal skills required for effective social information gathering, a more systematic approach to scaffolding and improving these skills may be beneficial. Networking exercises that explicitly teach the effective navigation of career-oriented

conversations and relationships (e.g. aimed at answering specific questions or even securing a work experience opportunity) could be practised in role-playing and peer-learning settings before being field-tested. Training programmes may also address the strategic dimension of social information seeking by teaching young people to identify and cultivate a network of professional social contacts for career information, moving beyond informal family networks. This has the capacity to expand not only their understanding of different careers through the information gathered, but also their ability to form preferences and engage in informed career decision-making.

Resilience

Perhaps most significantly, the emergence of resilience as a key component of career information literacy presents a novel contribution to the field. Resilience is not yet considered to be a defining characteristic of information seeking, as formal definitions of information literacy typically focus on the technical skills needed to find, evaluate and use information effectively (e.g. Secker, 2018). Unlike established information literacy frameworks that emphasise technical competencies (Secker, 2018; Hooley, 2012), resilience represents a fundamentally different category of competency that encompasses psychological endurance and emotional regulation. A reasonable expectation is that the 'informational' resilience discussed in this paper may also constitute a critical element of personal resilience in other information seeking contexts, such as migration (e.g. Aleghfeli & Nag, 2024).

The analysis of participants' reflective accounts in their diaries hints at an interesting phenomenon: that careers advisers should focus not only on providing information and scaffolding young people's digital and social skills, but also on encouraging them to maintain focus and stay motivated whilst looking for information. Here career counselling might bear some similarities to, and borrow some insights from, life coaching and positive psychology.

This finding raises important questions about whether traditional information literacy instruction adequately prepares young people for the psychological demands of career information seeking. The conceptualisation of resilience as a discrete competency suggests that career guidance and information literacy instruction, traditionally regarded as separate domains, require greater integration to address the psychological dimensions of information engagement more effectively.

However, the young people sampled in this study identified some deficiencies in their efforts to sustain attention and persist in information seeking, citing boredom and distraction as reasons. This observation resonates with current debates about the impact of digital technologies on information processing capabilities and attention spans (e.g. Zimmerman, Janhonen & Saadeh, 2023) and suggests that metacognitive skills should be developed. This paradox – where participants demonstrate metacognitive awareness whilst simultaneously encountering challenges in regulating their attention during information seeking – indicates that metacognitive skills may represent distinct competencies in need of further research.

Limitations

One limitation of this study is its focus on young people's self-reported perceptions and behaviours rather than their actual information-seeking behaviours. Future research could employ observational methods to examine how career information literacy manifests in practice. Furthermore, longitudinal studies could investigate the development of career information literacy over time and explore its relationship to career decision-making outcomes.

It is also important to note that sample bias and contextual influences may limit the transferability and generalisability of findings. The participants in this study were recruited from a broader survey study and specifically targeted for their high engagement. As a result, they may have been more skilled in career information literacy or invested in information seeking and career decision-making processes than average.

Whilst the sample of participants was exclusively drawn from Scotland, socio-economic and cultural factors could potentially determine the relative influence of social networks, access to technological resources, and the perceived urgency of career decision-making. In particular, cultural variations in attitudes towards career autonomy and families' involvement in career decisions may mean that information seeking behaviours and skills may manifest differently across populations outside Scotland.

Conclusion

This study fundamentally reframes career information literacy as a multifaceted construct that extends well beyond traditional conceptualisations of technical skills. The tripartite model of digital skills, social skills, and resilience provides both theoretical advancement and practical guidance for supporting young people's career development in increasingly complex and digitised information environments. The identification of resilience as a core competency represents a particularly significant contribution, highlighting the attitudinal dimensions of career information literacy that have been largely overlooked in existing scholarship.

For information literacy and career practitioners, these findings demand a paradigm shift from information provision to comprehensive skill development that acknowledges the complexity and varied demands of contemporary career decision-making. The integration of resilience and social skills into career information literacy interventions represents both an opportunity and an imperative for supporting young people's career development in an era of unprecedented information abundance.

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Note

For the purposes of confidentiality and protection of identity, participants' names used in the text are pseudonyms.

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