

Labour market information

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Introduction

This section describes some research studies into career interventions designed to increase exposure to either the workplace or professionals within it, which offer learning opportunities or the chances for using evidence and ideas in approaches

In doing so, in the Practices and Outcomes section, we have noted the potential contribution that the study could make to practice, by identifying the type of challenge it addresses.

As well as publications showing implementations for this type of career intervention, we have included several resources from other media, including talks, interviews and case studies. These may not be “academically” rigorous, but can provoke reflection and understanding of further approaches. These are included in the “Further illustrations and perspectives” section.

Finally, from either discussions we have had with the CDI, or through research agendas suggested in careers or related fields, we include a section on some potential future “Research questions”.

Practices and outcomes

Selected publications that describe practices and outcomes for different challenges are listed below, with links in the title column. We have mostly included open access sources, but where the sources requires payment, it is noted next to the link by “(Paid)”.

Title	Themes	Brief description
Warwick Institute of Employment Research (n.d.), Careers LMI. Evidence and Impact (Link)	Justifying investment in LMI through evidence of the impact	This webpage written by the Warwick Institute of Employment Research provides a list of publications that describe the positive effects of LMI on the outcomes of individuals.
LMI for All (n.d.) Effective decision-making and the role of labour market information (LMI) in career guidance (Link)	Using LMI with career guidance to support individual choices and effective labour markets.	This is a discussion article with a review of evidence to explore the role of career guidance and LMI in economic outcomes by way of affecting the supply and demand of the labour market. The article relates individual decision making with choices, and then macro scale impacts. LMI is, however, cited as being insufficient by itself and requires career guidance to support effective decision making.
ETI (2009), Evaluating the Quality of Careers Information, Advice and Guidance provided by Career Information, Advice and Guidance Providers (Link)	Assessing information quality used in guidance	While this study is now dated in terms of the findings, it provides a systematic method and approach to assessing the quality of information (as well as wider CIAG) provision from different service providers, looking at both the information itself as well as policy and infrastructure dimensions (amongst others).
Murray, A. (2010), The State of Knowledge on the Role and Impact of Labour Market Information: A Survey of the International Evidence. Ottawa: Center for the Study of Living Standards (Link)	Looking back to understand the pace of change in LMI provision	This report provides a recent-historic view of the international landscape of LMI in 2010. At the time, the author concluded that “we know very little about LMI”. The role by which LMI drives better outcomes for individuals and society was also not understood. Literature was gathered from around the world to examine practices of the time, with a chapter on the UK. The findings serve to compare with today’s knowledge and practices.
Kumar, S., & Arulmani, G.	Developing capabilities to	This paper finds gaps in the provision of guidance which uses labour market

<p>(2014). Understanding the labor market: Implications for career counseling. Handbook of career development: International perspectives, 225-239. (Link)</p>	<p>use market information effectively in career guidance</p>	<p>information (LMI). The authors review LMI and propose the ways that it is used in career guidance. The authors also include a proposal on the key competences needed to be able to use labour market information within guidance, and describe further ideas for its use in career educations.</p>
<p>Cedefop (2016). Labour market information and guidance. Luxembourg: Publications Office. Cedefop research paper; No 55.. (Link)</p>	<p>Developing effective strategies for adopting LMI into practice, while overcoming risks and gaps.</p>	<p>The principles of effective LMI use are addressed, including how it can be integrated into career guidance systems for at different stages. The document review practices for using LMI across European career services. It shows practices, success factors, gaps and obstacles. Competences are described for managing LMI. The study used a literature review along with field work in 11 EU states, and developed blueprints for practitioner toolkits. The importance of training for practitioners was also addressed.</p>
<p>Cedefop (2016), Labour market information in lifelong guidance: Case study visit focusing on IMT en ligne, Placement en ligne, REPÈRES, in Quebec, Canada, European Centre for the Development of Vocational Training, (Link)</p>	<p>Building or auditing a system for delivering labour market information</p>	<p>This section present the focus of the case study in the Quebec province. to examine the provision of LMI. In the region, the organisation responsible for the production of “IMT en ligne” is the Ministry of Employment and Solidary, through its public employment agency, Emploi Québec. The service is described in terms of the questions it answers, functionality (e.g. a “labour exchange system tool where employers place their job orders and job seekers offer their service through a skills and occupational based database”, the data collection mechanisms, and its use in career guidance to support clients and practitioners. The researchers include a SWOT analysis on the system and consider the transferability to other settings.</p>
<p>CooperGibson Research. (2017). Informed Choice: How Data and Tools are Used to Make Career Decisions.</p>	<p>Helping career decision makers to find and navigate an array of information on the web.</p>	<p>This report was written in light of concerns about the numbers of websites that offer career information, and how it might be overwhelming young people with information that is fragmented and hard to navigate. This research aimed to explore the current use of careers information, data, sources and tools by learners, parents and</p>

<p>Department for Education. (Link)</p>		<p>carers, teachers and careers guidance professionals in making informed choices. This research was a qualitative research exercise that looked at practices across schools from primary to FE, and involved interviews with advisers, teachers, parents and students, along with an online survey. Respondents did not see a need for additional tools and information, but thought that improved signposting, accessibility and relevance.</p>
<p>Vigurs, K., Everitt, J., & Staunton, T. (2017). The evidence base for careers websites. What works?. (Link)</p>	<p>Building a careers website - or using careers websites as part of career education - for young people.</p>	<p>This paper provides a literature review on the use of career websites with children and young people in a range of educational settings. It draws out good practice that may be used by students and education institutions. Examples are given of the few evaluation studies conducted thus far, which show social mobility benefits. Some good practices were found, such as providing self-assessment opportunities alongside career information, and tailor such websites for the unique needs of young people.</p>
<p>Milot-Lapointe, F., Savard, R., & Paquette, S. (2018). Effect of labour market information (LMI): Comparison between independent and assisted use of LMI. Canadian Journal of Career Development, 17(1), 43-52. (Link)</p>	<p>Combining counselling with the provision of LMI to help clients achieve better employability outcomes</p>	<p>This Canadian study assessed the effect of LMI use, with and without the help of a counsellor, taking into account the different client consultation needs (career choice or job search). Clients (n = 203) in job centres in New Brunswick and Saskatchewan were assigned randomly to two delivery modes: “self help” without help or “assisted self-help” (with the help of a counsellor). The results suggest that the LMI effect over time, although it is significant in both groups, is more important when participants are assisted by a counsellor.</p>
<p>Alexander, R., McCabe, G., & De Backer, M. (2019). Careers and labour market information: An international review of the evidence. (Link)</p>	<p>Understanding and adopting ‘what works’ in LMI use to best address client needs. Lobbying for policymakers to supply effective LMI</p>	<p>This extensive report provides an evidence review into LMI - explaining what it is, where it comes from, how gaps can be filled, quality and how LMI relates to career guidance theory. The paper focuses on literature from 2008. The authors found a need to clarify what LMI was, found that technology could both help and hinder, there were gaps in how comprehensive it is, the end user prefers quality to quantity, and there needs to be consideration of career theory i.e. “matching” careers that LMI</p>

		suggests may offer opportunities to clients' skills is recognised as an overly simplistic application. Lessons are also provided to policy makers, such as highlighting the need for broad information, the need to promote accessibility, and the need for quality assurance and expert mediation.
European Training Foundation (2019), Big Data for labour market intelligence: An introductory guide. (Link)	Delivering LMI which is future proof and considers the potential applications from Big Data (and analytics)	Aimed at statisticians, researchers, policy analysts and decision-makers in the ETF's partner countries who are confronted with the challenges of anticipation and dissemination of insights on the dynamics of demand for jobs, skills and qualifications, this paper addresses key conceptual, methodological and organisational aspects in using Big Data for labour market intelligence. It clarifies how Big Data can be used to go beyond the frontiers of conventional approaches to labour market information systems and add value to established statistics.
Alexander, R., McCabe, G., & Backer, M.D. (2019). Careers and labour market information: an international review of the evidence. (Link)	Improving the impact of LMI by auditing and remedying issues, from with a policymaker and practitioner remit	The researchers of this paper seek to provide clarity and practical insight for two key audience groups - policymakers and practitioners involved in careers services. International evidence is used to enable policymakers to create excellent careers services, supported by LMI; and assist the providers and users of LMI with insight into what constitutes good practice in its creation and use. The authors outline shortfalls in LMI provision - there is a lack of clear and inclusive view of what LMI is, technology is an opportunity but can create quality problems, LMI might not be comprehensive, career professionals need to be skilled to use it, LMI should be linked to theories of developing career skills.
Jackson, D., & Bridgstock, R. (2019). Evidencing student success and career outcomes among business and creative industries graduates. Journal of Higher Education Policy	Providing holistic labour market intelligence to inform students' career decisions	Measuring outcomes in full-time employment terms does not capture the complexities of underemployment, the rise of portfolio careers, the constraints of the labour market and graduate motivations for working arrangements that can allow greater flexibility and work-life balance. This Australian study explores the career outcomes of Business and Creative Industries graduates using both traditional measures (full-time employment outcomes) and a suite of broader measures that

<p>and Management, 41(5), 451-467. (Link)</p>		<p>examine career satisfaction, perceived employability, perceived career success, underemployment, and graduate motivations for seeking new roles. Findings confirm disciplinary differences in graduate experience, and raise some broad concerns about the quality of graduate employment, particularly given the lack of improvement in outcomes over time since course completion</p>
<p>Jackson, Denise, and Michael Tomlinson. "Investigating the relationship between career planning, proactivity and employability perceptions among higher education students in uncertain labour market conditions." Higher education 80.3 (2020): 435-455. (Link)</p>	<p>Understanding the perceptions of graduates on labour market conditions and resulting behaviour</p>	<p>This paper addresses an "outcome" of higher education system, in terms of exploring the perceptions of labour market demands by students in the UK and Australia and looking at the impact on behaviour - using a survey of n=433. Students who reported more positive perceptions of the current labour market were more likely to develop higher self-perceptions of employability, believe they had a greater sense of control over their career yet were less engaged with proactive career behaviours</p>
<p>Wilson, R., Barnes, S-A., May-Gillings, M. Patel, S. and Bui, Ha. (2020), Working Futures 2017-2027: Long-run labour market and skills projections for the UK Main report. Report by the University of Warwick and Cambridge Econometric for the Department for Education (Link)</p>	<p>Forecasts for UK skills demands to 2027</p>	<p>This extensive report provides an example of labour market forecasts for the UK to 2027. As well as providing the assumptions of Government, some years into the project, it also allows for a critical review of the accuracy of the forecasts presented. The report also describes how different possible future scenarios might affect the demand for different skills, so providing an analysis of inherent uncertainty. Some sectors are anticipated to grow while others decline. The public sector is anticipated to reduce its relative workforce for instance, manufacturing is expected to decline, while business and the services sector is expected to outpace other sectors and grow.</p>
<p>Barnes, S.A. and Bimrose, J.</p>	<p>Understanding the landscape</p>	<p>The aim of the report was to provide an overview of the supply of labour market</p>

<p>(2021), Labour Market Information and its use to inform career guidance of young people: An overview of the labour market systems for career guidance in England. Coventry: Institute for Employment Research, University of Warwick. (Link)</p>	<p>of labour market information and intelligence that can be drawn from it in the UK.</p>	<p>information (LMI) and intelligence through interpretation (LMI+) in England, to highlight data sources and gaps. The report includes a review of 119 sources and includes an overview of the role of different organisations in its provision. Interpretation of the classification and analysis included interviews with eight stakeholders who are those engaging with the information, or using it to provide a service to career clients. The report therefore provides an overview of the wide range of sources that exist, where to find them, and perspectives on gaps.</p>
<p>Dockery, A.M. (2021), Secondary students' access to careers information: the role of socio-economic background. The Australian Educational Researcher. 49. p1001-1023 (Link)(Paid)</p>	<p>Being mindful of practices that increase inequalities.</p>	<p>This paper focuses on how careers advice provided to Australian secondary school students varies according to students' socio-economic background. National data for students in Years 11 and 12 from five cohorts of the Longitudinal Surveys of Australian Youth initiated between 1998 and 2015 are analysed. Students from higher socio-economic backgrounds are found to be more likely to access multiple forms of careers information, particularly information relating to university entrance, compared to students from low-SES backgrounds. Conversely, students from lower socio-economic backgrounds are more likely to receive information on pathways to non-professional vocations. This socioeconomic divide has become more pronounced over time</p>
<p>Gatsby (c2021), Stories from the North East pilot: Supporting students with good quality research. (Link)</p>	<p>Using labour market information in a school setting</p>	<p>This case study describes how a school in the North East of England provided labour market information and intelligence to their students. Some tips are provided - such as recognising the ability of students to process the information, so focus on favoured industries rather than the whole workforce. In this example, students were give lessons on LMI and the school also built a database. Benefits of the project were articulated by staff and students through testimonials.</p>
<p>Staunton, T., & Rogosic, K. (2021). Labour market information</p>	<p>Reflective practice in using LMI</p>	<p>This literature review explores the relationship between LMI and careers guidance. The paper presents six theoretical conceptions from the career literature:</p>

<p>and social justice: a critical examination. International Journal for Educational and Vocational Guidance, 21, 697 - 715. (Link)</p>		<p>Contact, Rationalism, Nomad, Adaptability, Constructivist and Social Justice. These are used to explore the relationship and have implications for practices. The authors argue for a) more constructivist understandings of LMI, and b) a more critical understanding of labour markets.</p>
<p>Vankevich, A., & Kalinouskaya, I. (2021). Better understanding of the labour market using Big Data. <i>Ekonomia i prawo. Economics and law</i>, 20(3), 677-692. (Link)</p>	<p>Applying big data methodologies to enhance insight from labour market data</p>	<p>The paper discusses how big data and analytic methodologies can be combined to enhance labour market data, by using real time insights into both the supply-side and demand side for different jobs, obtained by scraping data from websites for job postings and also using the competencies found within candidate CVs..</p>
<p>Wilson, T., Allen, J., Pye, K., & Pye, M. (2021). School, college, and student perspectives on information shared about educational pathways: Gatsby Benchmark 7. (Link)</p>	<p>Understanding information priorities of 11-19 year old students</p>	<p>Mindful of the Gatsby benchmarks, and the general importance of accurate information, this research was to understand the breadth, quality and frequency of information being provided to school and college students about their onward education options. A survey was conducted of career leaders and advisors in 200 schools and 80 colleges and a survey of n>300 11-19 year old students. along with some depth interviews. The research found that, while A levels and BTECs are discussed most, vocational pathways receive less coverage. The information most valued by students is also measured, which is that jobs they are able to get with a given course.</p>
<p>Cremonia, R. (2022), The views of young people, parents and practitioners on the use of labour market information in careers. Gatsby (Link)</p>	<p>Understanding stakeholder expectations and benchmarks for provision of LMI in secondary schools</p>	<p>Gatsby-funded research has revealed the experiences and preferences of young people, their parents and careers professionals around labour market information (LMI) in career guidance, to inform practice around Gatsby Benchmark 2: learning from career and labour market information. Data was pulled from 22 schools and colleges across England, using interviews, surveys and focus groups with young people, parents, Careers Leaders and careers advisers. fewer than half of the schools and colleges reported receiving local LMI resources (in the form of a</p>

		newsletter or dedicated website) from their Local Enterprise Partnership (LEP) or local/combined authority.
Barnes, S.A., Hogarth, T., Baldeuf, B., Cárdenas Rubio, J., Ragnarsdottir, H. and Elmezraoui, W. (2023), Labour market information and an assessment of its applications: a series of international case studies. Report by the Institute for Employment Research at the University of Warwick for the Department for Education (Link)	Understanding and learning from international practices in LMI applications	At a time that the Department for Education had been investing in expanding their use of LMI, this report examined international practices of sourcing and using LMI. The Unit for Future Skills commissioned the Institute for Employment Research at the University of Warwick to provide a comprehensive overview of the different approaches to gathering and using labour market information (LMI) and intelligence. A combination of case studies, 44 interviews and 3 workshops were used to collect data. The insights are structured around: Organisation and management of LMI, Resourcing, Methodologies (for analysis), Stakeholder engagement, and Dissemination.
Atay, S., Müftüoğlu, C.T., Şahin, M., & Ceylan, S. (2024). Design of a web based career counselling information system: Türkiye case. Education and Information Technologies. (Link)	Understanding the process steps to build a successful LMI website / application	This paper describes the creation of a “web-based career counselling system” which holds universities’ labour market performance to support career guidance. The paper describes the phases of research, A pilot study involved 30 career counsellors after which it was examined with 14884 career counsellors, and 40 respondents provided feedback for improvements. The system received positive feedback from counsellors.
Milosheva, M., Robertson, P., Cruickshank, P., & Hall, H. (2024). The collaborative use of career information by young people and career advisers: A thematic content analysis of career counselling	Critically evaluating the use of LMI by clients and practitioners to identify improvement opportunities.	This study is set in Scotland and describes research to understand the way that young people and careers advisers from Skills Development Scotland (the national skills agency) use labour market information in collaboration. The data was obtained from notes taken in career discussions. Three sorts of information seeking routines are found: prompted information seeking; information seeking on young people’s behalf and collaborative information seeking. Suggestions are made for

records. Australian Journal of Career Development, 33(1), 72-81. (Link)		improvements to the use of information in career services with a suggestion made by the researchers to consider career information literacy initiatives.
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Further illustrations and perspectives

Beyond the academic literature, there are practical examples of these types of interventions, as well as potentially videos, podcasts and blog articles that all provide a broader perspective, Below represents a collection of such:

Title	Themes	Brief description
Ceric (c2022), Webinar #1: Free Webinar Series: Labour Market Information Series: New LMI for Career Practitioners. (Link)	Applying LMI to understand the needs for interventions in the population	Canadian Education and Research Institute for Counselling (CERIC): a charitable organisation that further career guidance in Canada. This 1hr lecture is targeted at career practitioners and provides the case for using LMI to target - particularly adults - with the greatest needs in their careers.
Career Hub Cornwall and Isle of Scilly (n.d.), Labour Market Information Presentation (Link)	An example of an LMI presentation to give to students ages 7-11	This is an example presentation provided by Career Hub Cornwall and the Isle of Scilly, aimed at 7-11 year olds. The presentation material addresses Gatsby Level 7.
Ilostat (n.d.), Labour market information systems (Link)	Understanding labour market information systems	Labour market information systems (LMIS) are important for employment policies. In this discussion, Ilostat, who are themselves a major global provider of LMI, describe the actors in a labour market system, the purpose, function, and types of sources used. ILO itself is a labour market information source, and the article describes the services it provides.
LMI for All (n.d.), Case studies (Link)	Using LMI to build a bespoke application for a client group	“ LMI for All is an online data portal that was funded by the Department for Education (and developed over 2012-17). It brings together existing national sources of high quality labour market information (LMI) that can inform people’s choices about their careers. LMI for All includes information from key datasets from, for example, the Office for National Statistics (ONS), the Department for Education and HESA.” Case studies show how some organisations have used the data to build their own applications. (Several further publications were commissioned by the DOE e.g. to document progress with the project , and enhance the database)
US Bureau of Labor Labor Statistics, Clusters,	Considering different methods of	This short article from the US Bureau of Labor Statistics talks about a fundamental decision in presenting labour market

pathways, and BLS: Connecting career information (Link)	presenting occupations in LMI	information, namely the clustering and organisation of occupations. It contrasts the Standard Occupation Classification system with Career Clusters and Pathways
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Future research questions

From the CDI's discussions with stakeholders, there is recognition amongst researchers about both the opportunity to use datasets and their limitations to offer more targeted career advice. To these ends, questions include:

- Understanding the outcomes and trajectories of people taking different courses in education - to better inform students on qualification choices.
- Opportunities from joining different data sets to provide new insights into lifelong career journeys - to highlight areas for careers support through the lifespan.

An ethical question surrounds the use of LMI:

- (To what extent) should CEIAG practitioners influence clients towards sectors or professions with skills in demand?

The area of information provision is currently seeing much interest focussed on the role of AI and both the potential and the risks for AI career support tools, that purport to offer advice and guidance. Questions raised include:

- The opportunities and risks of AI being used to provide advice