



## Critical considerations of career enrolment data: Challenges, limitations, and possibilities

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### Abstract

The advent of Career Enrolment Data (CED) in Higher Education is an important development for graduate employability practitioners and other stakeholders seeking to understand, analyse and enhance students' career readiness. CED, collected annually from all students in participating universities, requires students to self-report on their own career readiness, and is described as having 'the potential to be a component of a standardised measure of learning gain in relation to student employability' (Cobb, 2019, p.23). Reflections are offered by two graduate employability practitioners currently tasked with introducing CED to educators and recommending its use to support careers-focused components of their curricula. Drawing on different disciplinary backgrounds to inform their approaches, both practitioners are keen to explore opportunities to capitalise on the strengths of data insights. However, they advocate for a carefully nuanced and contextualised approach, openly acknowledging relevant limitations and risks when presenting the data to educators and other stakeholders. Drawing on one author's background in psychology, it considers the process of self-reporting on which the data wholly relies, noting potential influences and biases that may be relevant. The second author offers a sociological perspective, using the concept of neoliberalism as a framework for engaging with concerns about an employability agenda driven by corporate and economic interests, and a culture of auditing sometimes associated with hardship for academics and a detrimental effect on pedagogy. While it should be noted that experts in CED such as Gilworth and Cobb take care to acknowledge limitations and risks (Cobb, 2019; Gilworth, 2023) this reflective account grapples with the challenge of ensuring that these important nuances are not lost as the context shifts from theory to practice.

### Keywords

Career enrolment data, career registration data, career readiness, employability, self-perception, neoliberalism, graduate employability practitioners

### Introduction

Career Enrolment Data (CED) is gathered from Higher Education (HE) students' self-reports of their own career readiness, with a view to supporting graduate employability and guiding career development learning initiatives. Considerations explored in this paper emerge from the work of two graduate employability practitioners (GEP) at one of the first universities in Australia to collect CED. Employed as Careers Educators in a centralised teaching and learning team, their roles centre around supporting academics to build and strengthen the careers-focused learning in their curricula. They

introduce, interpret and utilise CED in this context. Different academic backgrounds inform each authors' approach. One is currently undertaking a PhD in developmental and personality psychology, particularly focusing on perceptions of self and others. She has taken a keen interest in the role of self-perception in self-reporting, considering possibilities and limitations associated with this aspect of CED. Grounded in sociology, following doctoral studies and over a decade of teaching in this discipline, the other author is interested in contextualising CED within broader trends in HE, specifically the neoliberal ideology often associated with the employability agenda. While these divergent angles inform their critical reflections, both authors are ultimately optimistic about the potential for CED to contribute to positive outcomes. This is because of its unique insights into students' perceptions of the status of their employability, and the value of these insights for shaping curricula and providing well-tailored resources and services to students. The authors' aim is to contribute to Healy et al.'s (2022) call for a 'multifaceted ecology of professional and academic work' to support student employability (p.1139) and to make best use of their influence in their institution to encourage nuanced and critically informed approaches to CED.

Modelled on Career Registration, a data collection tool adopted by several UK universities (Association of Higher Education Career Services, 2022), CED is collected annually from students as part of the enrolment process. The aspect of CED this article will focus on is the part concerned with students' career readiness. This requires students to select one statement (out of 10) that best represents their carer readiness position (examples include: 'I am not ready to start thinking about my career yet', 'I am planning to apply for further study' and 'I am currently employed/self-employment and not seeking assistance'. For the purposes of data analysis, their selected statement is used to sort them into one of four categories: Decide, Plan, Compete, and Sorted. These are not communicated to students at the time of enrolment. The data can be used to 'understand student journeys and to provide the most appropriate impactful careers and employability support, to direct scarce resources to where they will make the most difference and to monitor the success of strategies and activities in this area' (Gilworth, 2023, p. 453).

## A psychological perspective

One of the core challenges in evaluating self-perceived employability measures is that the term employability is difficult to define. In the context of Organisational Psychology, van Harten et al.(2022) broadly define employability as 'an individual's potential in the labour market' (p.145). Their systematic review explores fragmentation in the definition, using Forrier et al.'s (2015) three strand categorisation framework. The framework focuses, firstly, on personal capabilities that foster employment potential; secondly, on assessing potential through self-perceived employability; and thirdly, on the realisation of potential through occupational moves. Each strand comprises several dimensions, including human and social capital, self-awareness, and adaptability. In examining the relationships across and within strands, and measures used, they conclude that although the three strands are connected, employability research is fragmented, and definitions remain unclear. It follows that research into students' self-perceived employability (SPE) is also problematic. In a systematic review of 88 studies, very few authors 'define, conceptualize, or operationalize SPE in distinct terms' (Duggal et al., 2024, p.94).With these contextual challenges in mind, tools reliant on students' own assessment of their career readiness are clearly worthy of careful consideration from a psychological perspective. As Neroorkar explains, the value attributed to self-perceived employability measures rests on understandings that individuals who believe themselves to be employable are more able to engage proactively with career management (Neroorkar, 2021). However, Vazire & Carlson's (2010) review of self-knowledge of personality considers self-perception imperfect because of potential for bias. Students' perceptions of their competence and proactiveness should be considered in view of other contextual factors that could contribute to perceived employability (Vanhercke et al., 2014). Robins and John (1997) highlight similar limitations in accuracy measures and the development of self-perception, holding that self-

perception is driven by specific motivations consistent with ulterior motives and is underpinned by psychological mechanisms associated with self-presentation, relevant to all self-reported measures. This idea supports critical insights into what the tools measure, and how findings relate to career outcomes.

Many approaches explore development of self-perception through processes of comparison, for example between past selves (e.g., Albert, 1977; Ross & Wilson, 2002) and future imagined selves (Hanko et al., 2010; Wilson, et al., 2012). Applied to career readiness, students might self-report a need for further study because they are unexpectedly unemployed or underemployed, rather than because they have evidence that further qualifications will benefit them. Similarly, they might feel ready to look for graduate level work because they have previously obtained casual roles, not because they are well-informed about current recruitment standards. Awareness of these possible influences on students' self-reporting supports more nuanced and accurate readings of the data, allowing for factors existing outside of university curricula that impact on students' perceptions of their career readiness.

Another mode of comparative self-assessment draws on counterfactual thinking (Roese, 1997), contrasting a current/actual self against an imagined alternative (Miller & Turnbull, 1990; van de Ven & Zeelenberg, 2015), in which different events (perhaps a more advantageous internship, or a less enticing job offer) lead to different outcomes. This comparative mode of self-perception aligns with internalised standards, whereby individuals assess themselves against standards they set (Higgins, 1996), potentially stemming from childhood (Young et al., 2003). Regarding career readiness, a student may feel unready because they find themselves unable to meet 100% of a job's key selection criteria, electing instead to undertake further study. Here, the internalised standard may be much higher than required, so the individual may be more career-ready than they think. These theories further highlight the arbitrary and contingent ways in which self-perceptions of employability might be formed. They also demonstrate ways in which a students' self-perceptions might differ significantly from a potential employer's perceptions of their career readiness, which is useful context for analysts of CED to consider.

If students perceive CED as a performance measure, they may overestimate or underestimate their career readiness for a range of reasons, in keeping with Narookar's (2021) observation in the context of measures of employability, that 'in the case of subjective data, individuals are likely to over-report socially desirable outcomes and under-report undesirable outcomes' (p.861). Specific concerns relate to impression management. A final year student might indicate readiness to compete for jobs, believing this will be interpreted favourably by the university, rather than because they feel ready. Conversely, malingering is a response bias in which individuals seek to elicit attention or assistance (Osborne, 2013). Malingering in the context of CED could manifest in an individual reporting low career readiness. This manifestation could also be a result of other forms of negative response bias, such as feigning, 'which indicates intentional misrepresentation without assuming the motivation for such' (Rubenzer, 2020, p. 324). Given biases associated with self-reporting, measures such as CED also appear likely to be shaped by psychological constructs such as self-esteem and self-worth and can impact on job search behaviours and employment outcomes (Kanfer et al., 2001). Further connections can be formed with 'imposter syndrome' and the Dunning-Kruger effect, whereby students might underestimate or overestimate their abilities, which could influence their self-perceived employability.

However, the psychology of self-perception also highlights opportunities for potentially useful insights gained through self-reporting. Self-perception formed through social comparisons with others (Festinger, 1954) can have a range of positive and negative impacts (Diel et al., 2021; Wheeler, 1966) such as increasing self-esteem (Diel et al., 2021; Wills, 1981), changing job search behaviour (Fu et al., 2019), and increasing career anxiety and career exploration (Zhang et al., 2024). This highlights a mode of self-perception formed via comparisons with peers' attainment of employment. While this may not be an accurate basis for assessment of students' career readiness, it suggests that students

look to their peers to understand their place in a competitive job market – a partial, but nonetheless useful contribution to self-awareness that may be reflected in CED.

Another relevant aspect of self-perception is the possibility of individuals forming self-assessments based on observations of their own behaviour (Bem, 1972). When a student perceives their own readiness, they may be reflecting on their proactivity in becoming career ready. Conversely, when indicating non-readiness, this may indicate awareness of inactivity. With demonstrable links between proactive approaches to employability and stronger outcomes (Cobb, 2019) this understanding of self-perception supports the viability of CED as offering insights into career outcomes. It is useful to note that correlations have been observed between students self-reporting higher levels of career readiness and those engaged in employability and professional experiences (collected in another area of CED) (Cobb, 2019). However, self-perception based on the observations of one's own behaviour does not guarantee accuracy of that self-perception.

Given that researchers have queried the reliability of self-perception, it is important to note the possibility of CED's self-reporting approach being verified by other relevant data sets, comparing trends in students' responses with employment outcomes. As CED is relatively new, conclusions should be drawn cautiously, but there are indications that students' self-assessments of their career readiness offer insights into their employability. Fifteen UK HE institutions gathered data for 308,000 unique students cross sectionally, and 118,378 students longitudinally, to observe shifts across three years (Cobb, 2019). Three institutions compared students' self-reported career readiness with actual employment outcomes. During 2016/2017, the career readiness data of 86,000 students, showed that students who identified with the 'compete' stage in their final year were more likely to obtain employment (Cobb, 2019). Neroorkar advocates for measurement strategies that incorporate both subjective and objective information to ensure a holistic approach (2021). Comparisons between data sets, such as those undertaken in Cobb's report, seem likely to enable a greater understanding of the value of self-reported career readiness.

The brief review of theories of self-perception offered so far serves to offer tentative connections between self-reported and actual career readiness. Jackson and Wilton (2017) suggest a positive relationship between self-perceived employability and employment outcomes, noting that higher levels of perceived employability may support navigation of periods of career turbulence, enhance self-determination, improve job performance and enable organisational effectiveness. However, they also warn against assuming a direct relationship. This would be notoriously difficult to demonstrate during the student journey as it only becomes evident retrospectively, at a point in the future at which a graduate's career is (or is not) underway. These kinds of complexities are worthy of consideration, particularly in light of the social/political context of CED to which this discussion now turns.

## **A sociological perspective**

HE has been associated by some critics with neoliberalism, understood as a force that serves corporate power and economic interests by promoting efficiency, competition, and measurable effectiveness (Giroux, 2020; Hooley & Sultana, 2017). It is important to note that the concept of neoliberalism is also strongly contested (Jessop, 2013) and described as 'a problematic rhetorical device that bundles together a proliferation of eclectic and contradictory concepts' (Venugopal, 2015, p.183). This discussion, however, makes use of the concept as just the bundling device Venugopal describes, encompassing several components with potential relevance to CED.

Mautner (2010) identifies two key connections between neoliberalism and HE. The first is the power of market forces to shape universities (see also Heath & Burdon, 2013). The second is the unique positioning of universities to develop and disseminate ideas (Giroux, 2014; Mautner, 2010). Concerns about neoliberalism in HE often overlap with unease about an increasing focus on employability (Bridgstock et al., 2019; Bridgstock & Jackson, 2019; Osborne & Grant-Smith, 2017; Rice, 2018; Rooney & Rawlinson, 2016; Sin et al., 2019). CED is a methodology presented as having some capacity to

'inform decision making and support evidence-based practice in a higher education careers and employability settings' (Cobb, 2019, p.10). This is important to consider with concerns relating to neoliberalism in mind.

Loveday (2018) incorporates 'the imposition of processes of audit' into a list of contributing factors to educators' anxiety in neoliberal universities (p. 155). Heath & Burdon (2013) similarly describe 'regimes of oversight, accountability and audit which ensure every academic knows that [they are] constantly being watched and judged' (p. 385). Compounding this unease, metrics for academics' success change constantly (Bennett, 2018) and apparent patterns in big data can mislead by highlighting idiosyncrasies and correlational phenomena without providing insights into relevant context (Kandiko Howson, 2018). Auditing may also impede best practice in research and teaching (Bennett, 2018) with the risk of prioritising measurable career-readiness outcomes above meaningful ones. A further consideration is the threat of eradication of disciplines and subjects that fail to meet targets. Insight into these ideas and experiences of auditing and metrics in some areas of higher education is useful contextual information for practitioners working with CED, particularly in light of Cobb's (2019) statement that 'Careers Registration data is included in institutional key performance indicators and metrics' (p. 23).

Further relevant insights accessed via a sociological lens lie usefully alongside the previously noted complexities associated with self-reported data, described from a psychological perspective. While that area of discussion explored ways in which CED may not offer wholly accurate accounts, either of career readiness or even of students' perceptions of their own career readiness, here a range of further mitigating factors can be added. Sultana advocates for acknowledgement of the impact of the job market, the economy, and government policies supporting deregulation and privatisation on individuals' career prospects (Sultana, 2024). These forces are likely to impact in turn on the possibility of students' identifying with a statement like 'I am ready to apply for graduate jobs and/or professional opportunities', as invited during CED collection. Sultana's view is shared by Narookar (2021) who queries the justice in allowing the onus for employability to rest with the individual, who is 'compelled to take full responsibility for their job security by keeping themselves attractive in the job market' (p. 861). Emerging technologies and global and local events with the capacity to impact on the job market are also important factors to consider when collecting data relating to students' career confidence and plans. Healy has called on careers educators to resist conceptions of employability that attribute responsibility to the individual while bracketing out social forces that impact significantly on their career prospects and contribute to marginalisation and inequity (Healy, 2023).

Drawing together the described insights from their respective disciplines, the authors advocate for a key role to be played by GEPs like themselves, tasked with introducing, explaining, analysing and interpreting the data in their institutions. This is to provide accurate and well-nuanced communications of CED, including careful definitions of its use and limitations, ensuring it is not mistaken for a measure of students' career readiness or employability, nor as a means of surveillance or assessment of the quality of careers-focused teaching. Early and ongoing discussions with academic educators and with their managers and leaders are proposed as a strategy both for alleviating concerns regarding processes of audit and surveillance, and to mitigate the possibility of the data actually being misused or misinterpreted. While limitations and nuance are well represented in research and reports (e.g. Cobb, 2019; Gilworth, 2023) it is important to ensure these also emerge explicitly in communications within HE institutions. For example, the term Career Readiness data (in place of Careers Registration or Career Enrolment data) is a common slip noticed by the authors, with the capacity to mislead. In addition to avoiding confusion or misuse, an informed awareness of the limitations of the dataset also enable the insights it provides to be applied accurately and usefully, as one information source offering valuable insights into students' self-perceptions of their own career readiness. In keeping with the integrated understandings of employability and holistic approaches to its measurement, for which career psychology researchers such as van Harten et al. (2022) have advocated these should be analysed and interpreted in careful triangulation with other data sources

including surveys of graduate outcomes, student experience surveys, industry reports, and academics' own insights into the needs, concerns and interests of their student cohorts.

## Recommendations

The following recommendations, informed by the given critiques, are offered by way of conclusion:

A range of complexities associated with CED should be openly acknowledged by GEPs to highlight its strengths and weaknesses, and to avoid confusion or misuse. The Career Industry Council of Australia's Professional Standards (2022) advocate for this critical, ethical approach.

To support and encourage meaningful self-reporting, CED can be socialised with students, explaining how it is used and emphasising that it is de-identified.

Embedding career development learning interventions into curriculum can provide students with reliable sources to inform their perceptions of their own career readiness (for example, reflecting on industry feedback to support self-assessment of competencies, or discussing their career plans with an industry mentor to evaluate their viability). This may support more meaningful responses from students providing data.

CED can be approached as a tool through which stakeholders can gain useful insights into trends in students' self-perceived career readiness, with an understanding that it is not authoritative, and that study experiences are not the sole influence on students' perceptions.

GEPs should be sensitive to concerns of educators when making recommendations or providing analyses based on CED. This includes affirming, particularly when self-reported career readiness is low, that the data does not assess quality of teaching, but rather creates limited insights into how students are perceiving their readiness, likely based on a wide range of factors. Where proposing curricular interventions to support students based on findings, a focus on options that impact minimally on educator workloads (such as building small changes into existing assessments to support career development) can support respectful collaborative work between GEPs and academics. This aligns with Daubney's approach to 'extracted employability', a phrase describing the outcome of 'identifying elements that have innate employability value in a programme, subject or discipline' (2022, p.97)

In addition to providing data, CED can also offer value as a process that leads students to reflect regularly on their sense of their career readiness, particularly if connections are made between the relevant question answered at enrolment and tasks undertaken in curriculum, such as developing career plans or undertaking skills audits. Building on more advanced data collected in the UK, ongoing research is needed in an Australian context to further investigate the contribution CED might offer towards the notoriously difficult task of measuring employability and career and job readiness as they develop throughout the student journey.

By offering insights drawn from their respective fields, both authors of these practitioner reflections have emphasised limitations, potential shortcomings and risks associated with CED. However, their purpose in doing so is to support accurate and ethical use of a data set they believe offers significant insights into students' early career journeys, with the potential to support development of more supportive and better tailored curricula.

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