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An international comparison of graduate outcome survey instruments: a critical reflection

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ABSTRACT

As national budgets shrink and the debate over the role of higher education intensifies, there is increased interest in the ways in which universities not only educate students but prepare them for the labour market. Underpinning this discussion is often the data that arises from national or international graduate outcomes surveys, which speak to both the performance of specific universities and the system at large. In this paper, we explore the differences in three graduate outcome instruments from Australia, the UK, and Europe. In doing so, we seek to highlight the unique approach that each instrument takes towards the measurement of graduate outcomes and how these design choices represent what aspects are deemed important in each context. Through our research, we hope to inform future discussions over the various approaches to measure graduate outcomes and illuminate the methodological assumptions that accompany these choices.

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Introduction

There has been much commentary of late in the higher education sector about the way in which universities are expected by their national governments to not only educate citizens, but to train the future workforce (Small et al., 2022; Tomlinson & Nghia, 2020). In fact, this is not a new responsibility as the broader tertiary sector has always, at least partially, existed for the workforce training of the professions of which any prospering country needs: e.g., engineers, doctors, scientists, teachers and nurses (Behle, 2021; Robson, 2023). What has changed in more recent years, however, are the metrics of how this responsibility is measured, assessed, and benchmarked. Increasingly, this is achieved through national graduate outcomes surveys, distributed to higher education graduates to reflect on their educational 'training' and how this training has supported them to enter the workforce.

There is little doubt that graduate outcomes surveys are incredibly useful and will, of course, continue to play an important role in the understanding of any national higher

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education system. Yet ironically, while considerable attention is placed on the data arising from such surveys, both at an institutional and national level, very little attention has been directed to reviewing and comparing the overall design of the surveys themselves. Given the importance attached to comparable statistics (see, for example, European Statistical System, 2019), such analysis is even more needed.

There is no such thing as a neutral or objective survey design. The research or evaluation instruments that researchers use always have implicit assumptions about what is important and how such constructs can – and should – be measured. In this paper, therefore, we present our research on an international comparison of three graduate outcomes surveys: including both the Australian and the United Kingdom's Graduate Outcomes Survey (same name but different instruments) and the European 'Eurograduate' survey. In doing so, we position our work to respond to two key questions:

(1) How do (national) surveys currently measure and assess university graduate outcomes?
(2) From the instrument design choices, what can be inferred about each (national) approach to measuring university graduate outcomes and what aspects are most important?

The value of this study is twofold: both not only to provide critical insight into the national approaches of measuring graduate outcomes but also to provide a much-needed reminder that the instruments which researchers use will always shape the knowledge that is gained. In other words, when reviewing the results of any dataset, the subsequent analysis should not just relate to what the data tells the reader, but what the questions say about the researcher(s) perspective on the topic. This is important in all research, but it is especially important in research such as graduate outcomes that shape both national policy as well as future funding mechanisms.

The structure of this paper will begin by introducing an organising framework on graduate outcomes, which was created to guide this study and the survey instrument analysis. We then will discuss how the surveys were analysed by the research team. Leveraging our organising framework, we then will discuss the similarities and differences of the survey instruments and provide a discussion on how these findings help emphasise the variations of national approaches to measuring graduate outcomes. Included in our work is also an Appendix with the available background information of each survey, as there are variations on how and when their distribution occurs, which also speaks to their design purpose and intent (see online supplementary material).

Constructs of graduate outcomes: an organising framework

This research began with a review of the dominant lenses used to measure graduate outcomes to inform an organising framework that would guide our subsequent analysis. Purposefully here we use the term 'graduate outcomes' rather than 'employability' or 'graduateness' as these terms are both broader (e.g., more than the impact of university on the individual) (refer to Dollinger et al., 2024; Glover et al., 2002) and 'graduate outcomes' is the term used by the survey instruments themselves.

As discussed by others, graduate outcomes have historically been conceptualised largely through the lens of a human capital model (Clarke, 2018). This model dates back to the 1960s and 1970s and, taken simplistically, assesses an individual or 'worker' through the skills, knowledge, and/or capabilities they have gained through work experience and/or education (refer to Marginson, 2019). Often, through a neoliberal lens, human capital theory also proposes to evaluate an individual's investment in (formal) education and training, with reference to its rate of return (Becker, 2009; Souto-Otero & Białowolski, 2021). Key measures in the human capital model include a person's level of education, their prior work experience, and any reflections (e.g., self-reflections or assessed through other means) of their skills, knowledge, or capabilities. University-specific measurements in the human capital model often seek to measure the degree to which universities offered or supported students to gain work experience (e.g., through internships or career service programs) or the way in which universities supported students to apply their theoretical knowledge in an authentic workplace environment (e.g., placements).

While human capital theory certainly has merit in the overall conceptualisation of graduate outcomes, scholars also increasingly recognise that there are other important facets and dimensions that influence how an individual can transition into the labour market. Tomlinson (2017, p. 2), for example, emphasises that 'any formally acquired employability skills cannot simply be transferred given that so many of the actual skills graduates deploy are derived from, situated in, and further generated through, the actual work context in which they are utilised'. The author, therefore, presents a graduate capital model that, besides human capital, includes social, cultural, identity and psychological capital. Similarly to Tomlinson, Tran et al. (2022) also highlight three additional dimensions contributing to graduate outcomes, including social capital, individual behaviours, and individual attributes.

Social capital broadly relates to 'the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition' (Bourdieu, 1986, p. 248). How a person has access to relationships and social networks can, in turn, help them find jobs or provide advice to navigating the labour market (English et al., 2021). Social capital also includes how the person's family or carer relationships shaped an individual's educational and/or career goals (Almeida et al., 2021). Critically, social capital also relates to an individual's social class or cultural background(s) and often places people who come from a lower socio-economic status or non-dominant cultural background at a disadvantage in the labour market (Pham, 2021). Social capital also manifests in the university or institution itself as it can be conceptualised as an organisational resource, which informs the type and nature of social relations within and outside of an organisation (Peña-González et al., 2021).

Another dimension arising from the discourse on graduate outcomes is that of individual behaviours, which relate to a person's career self-management or career building skills or choices (Jackson & Wilton, 2017). This dimension emphasises a person's agency in influencing job-related tasks they perform, their perception of those tasks, and their collaborations to achieve their goals and objectives (Berg et al., 2013). It specifically refers to the student's active engagement in and formation of their career profiles as well as their engagement with (future) workplace contexts (Tomlinson & Jackson, 2021). Examples of this could include an individual seeking

advice on writing a resume or attending a workshop to reflect on their career goals. It may also relate to an individual's experiences that extend beyond work experience and to volunteering or other roles that build their leadership or connectedness with others that later could influence what is perceived as work readiness (Jackson & Tomlinson, 2022).

Relating to this is also the dimension of individual attributes, or the personality variables or traits that individuals hold and/or display to others (Clarke, 2018). Individual attributes can also relate to the work in vocational psychology, which seeks to measure personality factors (e.g., extroversion). Usually, individual attributes are discussed in the context of social and cultural capital, including cultural background and a person's support networks. As described by Tomlinson (2017, p. 7), this also refers to the manifestations of individuals' embodied behaviours (as partly reflected in the category 'individual behaviours' above) as well as 'the overall personality package' that is partly reflected in the category 'individual attributes'. However, Tomlinson notes that in a context of mass higher education, formally institutionalised cultural capital may be less potent in shaping access to employment as the so-called 'field rules' have shifted in terms of what currencies graduates potentially trade off in the market.

Extended beyond the four lenses above, there are also two emerging dimensions of graduate outcomes, which arose through our analysis process (refer to the next section) and were included in our organising framework. First is a dimension that we are referring to as 'suitability'. This relates to the way in which a student's educational experiences match or align to their employment goals and/or outcomes (Albert et al., 2023). For example, if they studied in a specific disciplinary course, but then became employed in a role where this specific disciplinary knowledge was not a requirement of the role, then this would not count as 'suitable' employment. Suitability also relates to the individual's satisfaction with their current role, and how they feel their educational experiences prepared them for the role and/or helped them transition into the labour market (Grosemans et al., 2023). As will be discussed later, suitability lastly may also encompass a person's wellbeing, a broader concept than just satisfaction, and includes a person's mental health, happiness, and sense of purpose or belonging.

Second is the lens of civic engagement and/or values, which entails how an individual engages with the local, state or national governance (e.g., voting, fundraising, political affiliation). Recent research has suggested civic-mindedness as a key attribute to prepare students for a globalised future labour market (Pham & Jackson, 2020). Civic responsibilities can further relate to connectedness with local communities, a growing area of interest in the discourse and practice of service-learning (Mtawa et al., 2021). As will be discussed through the analysis, civic values may also relate to relevant global issues, such as attitudes towards climate change.

To summarise, as displayed in Table 1, our organising framework thus includes six dimensions of graduate outcomes to guide our analysis of the survey instruments. As a preview, Table 1 briefly indicates which dimensions appear in each of the three surveys and thus will be discussed in more detail in the following sections. Outside of the scope for this article is a review of demographic variables, such as gender or age. While we acknowledge that these variables are important for analysis (e.g., as control variables in

Table 1. Dimensions of graduate outcomes: organising framework.

Dimension	Scales (example(s))	Present in which instruments
Human Capital	Work experience, skill development	Included in all instruments
Social Capital	Access to networks, cultural backgrounds	Included in all instruments, however, sparingly in all, some can be linked to via other data (e.g., Student Record)
Individual Behaviours	Career self-management	Included in all instruments
Individual Attributes	Personality traits (e.g., resilience)	Not included in any instruments
Suitability	Education-employment (mis) match; satisfaction and wellbeing	(Mis)match included in all, satisfaction (partly) included in all, wellbeing included in UK and EU instrument
Civic Values	Engagement with politics, voting	Included in EU instrument only

multivariate regression models), they are not part of the operationalisation of the broader concepts related to graduate outcomes (e.g., human capital).

Research approach

This research used a qualitative methodology to illuminate how national survey instruments currently measure and assess university graduate outcomes. Due to the availability of the survey questionnaires and our knowledge of specific country contexts, we selected three survey instruments for comparison: Australian Graduate Outcomes Survey (2021), the United Kingdom's Graduate Outcomes Survey (2022), and EUROGRADUATE (2022). Further reasons for why we decided to compare those three instruments are: (1) Language: instruments had to be available in English; (2) Differences in covered area: while Australia represents a single country, the UK can be considered as a nation consisting of four countries, the EU is an economic and political union of 27 countries. This, for example, has implications for international students' and graduates' mobility, among other things. Within the EU, citizens are entitled to study at any university and work under similar conditions as nationals. We subsequently expected variations in how much emphasis is put on measuring study experiences abroad and in the ways they are measured within the three surveys; and (3) Variation according to cultural and political principles: while the UK and the Australian system share, to some extent, similar historical-cultural ties (e.g., the Commonwealth, use of the English language), the EU is characterised by a diversity of countries, which also might impact how graduate outcomes are being measured as it might make it more complicated to construct one core instrument for all member states. However, we believe that this makes a comparison particularly fruitful as we can gain new insights into similarities as well as differences between (national) approaches in understanding and constructing graduate outcomes, and to what extent they can be attributed to shared commonalities or differing country-specific contexts. For a summary of the historical contexts of the selected surveys, please refer to the Appendix (see online supplementary material).

We note here that Australia and the UK have two versions, in Australia for postgraduate and undergraduate, and in the UK, some question banks are specific for a certain type of degree (coursework or research students). This is discussed when relevant in our analysis. In addition, higher education institutions in

Table 2. Process of data analysis.

Step	Details	Description of analytical activities
Step 1	Deductive coding of data material	The instruments were coded by the first author. Memos with code descriptions, preliminary interpretations and ideas for ongoing analysis were written.
Step 2	Reviewing initial coding structure	The second author reviewed the codes and memos were enriched into comprehensive texts.
Step 3	Additional inductive coding of data material	Inductive category development, resulting in the consensus of the research team to add two dimensions to the organising framework.
Step 4	Finalisation of data analysis	Both authors compared and discussed the categories and accompanied coding scheme and settled on the final six categories to present results.
Step 5	Country-comparative analysis	Existing findings were revised and enriched.

Australia and the UK can add further blocks of questions for graduates from their own institutions. We also note here that we only included the core instrument of the EU survey. Due to the variation of countries within the EU, every country can add additional elements to their national surveys; however, these variations exceeded the scope of this study.

To analyse and interpret the instruments, we applied qualitative content analysis (Mayring, 2021) by using the software NVivo 14. First, we carried out desktop research to find the most recent instruments accompanied by further methodological and research reports ($N = 8$ documents with a total of 596 pages). We then uploaded the documents in NVivo and started the coding process according to the deductive categories. This method was chosen as it is used when the data material consists of a high amount of text and the aim is to condense the material and identify common themes. It also allows a combination of deductive and inductive category development during the analysis (Mayring, 2021). As mentioned above, we used an organising framework to guide the analysis, originally starting with four categories: human capital, social capital, individual behaviours, and individual attributes. This has led to 48 deductively coded segments. The indicators for human capital, for example, were competencies, experiences abroad, preparedness, skills, student employment, and work-integrated learning.

Simultaneously, while coding the data sequentially, we inductively developed categories that emerged from the data that did not align to these initial four categories. This came to eventually include two additional dimensions: suitability and civic values ($N = 42$ inductively coded segments). Table 2 illustrates our step-by-step process of analysis.

Other inductively coded segments ($N = 55$), referred to aspects such as further studies, COVID-19, or working in specific fields such as health, were not included in further analysis as they were not part of the guiding framework nor mentioned in all three instruments.

Findings

To present the findings from the comparison, we will introduce each dimension of graduate outcomes included in the organising framework and discuss how varying instruments did or did not include aspects of each dimension.

Human capital

Work experience

All three instruments asked graduates to some extent about work experience – a key component in a human capital lens, which includes placements, internships and/or work-integrated learning (WIL). These terms vary across disciplines (e.g., health more likely to use 'placements' and business more likely to use 'internships') but also in variations of the experiences themselves (e.g., duration and payment) (Vu et al., 2022; Wright & Mulvey, 2021). The national surveys each took a unique approach in their measurement to work experiences. For example, in the UK instrument, those graduates from providers who ask for the 'opt-in' bank of questions are asked as part of the question about how they found out about their job if they had already worked there (including on an internship/placement/apprenticeship). Graduates who completed a research degree are asked if they carried out a work placement or internship during their studies, followed by a prompt to indicate the duration (e.g., 1–4 weeks). There is also information collected on placements of students who are enrolled in 'sandwich courses' where they spend a year of their programme in industry via the UK Student Record, which then can be linked to the Graduate Outcomes dataset. This is different from Australia, which asks post-graduates (including from coursework degrees) a similar question, but without requesting duration (e.g., yes or no). Further, in Australia, the undergraduate version of the instrument also includes questions relating to WIL activities, which extends beyond placements and internships, to 'WIL not based in the workplace' (e.g., industry-informed curriculum) or 'Global WIL'. In Australia, undergraduate students are further asked to indicate how WIL activities improved their self-reported job prospects and professional capabilities, as well as other factors (refer to Table 3). We note, however, that the Australian undergraduate survey items are currently 'opt-in', as they have been endorsed and requested through a national organisation called the Australian Collaborative Education Network (ACEN) but are not currently mandatory for universities to include.

The European instrument also takes a distinct approach regarding work experience, asking all graduates if they have completed any internships or placements, and then asking them more broadly if this was or was not included as part of their formal study curriculum. The European instrument is also the only instrument to ask students about their paid labour participation during their study as part of their core instrument. This appears to be important, given that estimates show greater numbers of university students worldwide work part-time (Hauschildt, 2024; Lessky & Unger, 2022); however, research on how paid work influences graduate outcomes is still scarce (Bennett et al., 2023; Weiss et al., 2014).

Knowledge, skills and competencies

Building on work experience, the instruments also requested information about graduates' knowledge, skills and competencies. In both Australia and the UK, this is only included in the postgraduate or research degree versions of the instrument. Australia, for example, prompts postgraduates to indicate on a five-point Likert scale the degree to which they agree with statements about the outcomes of their experience, such as 'I improved my ability to design and implement projects effectively'. One of these

Table 3. Comparison of work-experience-related human capital items.

Country	Questions	Response frame
Australia (postgraduate students)	Did your course include an internship component?	Yes/no/don't know
	Did you participate in other types of work-integrated learning (e.g., placements, practicums, consultancies, industry research projects) as part of your course?	Yes/no/not applicable
Optional Australian undergraduate items (ACEN endorsed)	Which of the following WIL activities, if any, did you complete as a core or elective part of your <degree>?".	'Workplace-based WIL', 'WIL not based in the workplace' and 'Global WIL experience' or 'None of the above'
	The activities helped improve…. a) My appeal in the labour market, b) My contact network for improved job prospects, c) My awareness of other organisations where I could work, d) My professional capabilities for improved job prospects.	Five-point Likert scale ('strongly disagree' to 'strongly agree')
	Which of the following not-for-academic credit activities, if any, did you undertake while you were studying your <degree>?	'Volunteering', 'a position of responsibility in a club or society', 'mentee in an industry-based mentoring arrangement', etc.
	Which of the following paid work activities, if any, did you undertake while studying?	'Full time paid work relevant to your intended career', 'Part time paid work relevant to your intended career', 'Full time paid work not relevant to your intended career', 'Part time paid work not relevant to your intended career', 'Other' and 'None of these'.
	How did your WIL experience influence your employment outcomes?	'Secured employment with WIL industry / community partner', 'Secured employment because of experience gained during WIL', 'Secured employment through a network contact made during WIL experience', 'Other (Please specify)', 'None of these'
UK ('opt-in' bank of questions and research graduates, further information can be linked via Student Record)	During your research degree, did you carry out a work placement or internship?	Yes (allows for students to indicate duration from 1-4 weeks, 5-12 weeks or more than 12 weeks)/no
Europe	Did you do any internships or work placements during the study programme?	Yes/no
	Were any of your internships or work placements part of the curriculum of your study programme?	Yes/no
	Did you engage in any paid labour (e.g. student job) during your study programme?	Yes/no
	Were any of your paid labour jobs related to contents of your study programme?	Yes/no

statements, also unique to the Australian context, was 'I am confident that I can apply my skills outside the university sector', indicating that this is an important outcome for the Australian system. Alternatively, in the UK instrument, all graduates are asked to rate the extent to which they utilise the skills they learnt during their studies, though only research students are asked about their application of specific skills/knowledge (e.g., interpret/critically evaluate research findings) in the current employment (e.g., all the time, never). The EU instrument more closely aligns with the UK approach, asking all graduates (undergraduate and postgraduate; excluding PhD students) to self-rate themselves across 12 competencies (e.g., very low to very high) that are not (necessarily) linked to the formal study. It also asks graduates to reflect on these competencies again in the context of how they apply them in their current employment. This is noteworthy, as it raises questions into the value of asking graduates to rate these aspects themselves, as what these data are in fact capturing.

Study abroad

Another anticipated point of difference across the instruments is how they prompt graduates on their study abroad experiences. Australia asks all graduates this question simply, 'Did you undertake any study outside Australia?' in a yes or no format. The UK asks only research students and requests the duration of study in their Graduate Outcomes survey as further information on whether students have undertaken a period of study abroad is collected through the Student Record, which can then be linked to the Graduate Outcomes survey. While the EU instrument measures, firstly, more broadly if the students did undertake any experiences abroad, it secondly measures details about each experiences abroad (up to five can be mentioned) with five additional questions: (1) type of experience (e.g., study abroad, work placement), (2) country, (3) duration of stay, (4) the amount of credit points (ECTS) one obtained during studies abroad, and (5) whether this stay was supported by a mobility program (EU, nation, or other). This question is once again asked of all graduates.

Social capital

All instruments also included an aspect of social capital; however, this was quite a light touch. For example, instruments asked graduates to indicate their university and degree type, which, if used comparatively in the analysis of outcomes, could indicate some degree of social capital. In the Australian and UK instruments, graduates are also asked to indicate how they found employment (in the UK as part of the 'opt-in' bank for research students), which overlaps with individual behaviours (next section), but is a chance for them to indicate if this was through contacts. In Australia's undergraduate opt-in questions, graduates can also agree or disagree that their WIL activities (e.g., placements, simulations) strengthened their 'appeal in the labour market' and/or 'contact network for improved job prospects'. .

Individual behaviours

Our analysis shows that individual behaviours were partly measured in all three instruments. For example, when related to self-management and navigating career pathways, job searching is one of such activities measured in the three surveys. In the Australian

Table 4. Individual behaviours summary.

Country	Questions	Response frame	Notes by the authors
Australia	The following statements are about your skills, abilities and education. Please indicate the extent to which you strongly disagree, disagree, neither disagree nor agree, agree or strongly agree with each of these statements.	Eight statements measured on a five-point Likert scale, such as 'My job requires less education than I have', 'I have more job skills than are required for this job' or 'Someone with less education than myself could perform well on my job'	Subjective reasoning is being asked if there is a mismatch
UK	Did you need the qualification that you completed 15 months ago to get the job? (Dependent on routing), Select one option only	Six options to answer with several variations for 'Yes' (i.e., yes, both the level and subject of qualification was a formal requirement; Yes, the level of qualification was a formal requirement; Yes: the subject of the qualification was a formal requirement; Yes: while the qualification was not a formal requirement it did give me an advantage) / 'No: the qualification was not required' / 'Don't know'	Subjective reasoning is being asked in general
Europe	What level of education is usually required to perform this job?	Options to answer: lower than higher education; short-cycle higher education; Bachelor or equivalent degree; Master or equivalent degree; Doctorate/PhD	Very detailed when it comes to education-employment (mis)match but no subjective reasoning
	Would you say that your current employment is in line with your study programme…		
	…with regard to professional qualifications (field of study)?	Five-point Likert scale (ranging from 'yes, absolutely' to 'no, absolutely not')	
	…with regard to the position?	Nine-point Likert scale (ranging from 'my position is significantly higher' to 'my position is significantly lower'	
	…with regard to the level of the work tasks?	Nine-point Likert scale (ranging from 'the level is significantly higher' to 'the level is significantly lower'	

instrument, graduates are asked 'How did you first find out about this job?' with optional answers such as 'university careers fair or information session', 'other university source (such as faculties or lecturers or student society)', and/or 'advertisement in a newspaper or other print media'. The UK instrument measured job-finding in a very similar way by asking graduates with, 'How did you find out about the job you were working in on [census week]?' with options such as 'your university careers service', 'employer's website', 'other university source (e.g., lecturer, website)'. Nevertheless, it only asks to research students in the UK Graduate Outcomes questionnaire.

The EU instrument, however, differed on how graduates were asked about job searching behaviours, instead opting to focus on the duration of time graduates have spent/are spending on searching for a job. For example, the instrument included the

question, 'When did you begin looking for employment?' with the following options to answer: 'Prior to graduation', 'Around the time of graduation', 'After graduation', or 'Obtained employment without searching'. Please refer to Table 4 for a summary.

In all instruments, graduates were also asked about their career-building behaviours or skills, including volunteering or working without formal paid remuneration. The Australian and UK instruments asked the graduates whether they currently volunteer. For example, in the Australian instrument, graduates can respond to the question of 'What are your <working/payment> arrangements?' with the choice of 'Unpaid voluntary work'. Similarly, in the UK instrument, volunteering was included in the question of 'What was your employment status?' with 'volunteering' being one of the options that can be selected. The UK instrument also asks respondents about some of their current activities, and how they rate the importance of these activities, and one option in this is 'Voluntary/Unpaid Work for an Employer'.

Meanwhile, the EU instrument asked students about volunteering in the context of what they did before they graduated from university, by asking the following question: 'Did you do any voluntary activities during your study programme (e.g., student union, campus newspaper, youth work, trainer in sports club, etc.)?' that can be answered with 'yes' or 'no'. This is notable as research has found this could be a significant factor influencing students' post-university work transition (Weiss et al., 2014).

Individual attributes

The dimension of individual attributes refers to an individual's personality variables. Tran et al. (2022) note that individual attributes often are measured through five dimensions: optimism, propensity to learn, openness, internal locus of control and generalised self-efficacy. However, more recently, dimensions such as adaptability and flexibility are increasingly considered as crucial in times where labour markets are constantly changing and where individuals are likely to move between jobs (Jackson & Collings, 2018; Tran et al., 2022). Yet analysing the three surveys reveals that these individual attributes are missing in all questionnaires. There may be a few reasons for this, including the rationale argument that it may be outside of the scope of the university's influence (or responsibility) to influence such individual factors. It may also relate to each context, likely striving to keep the survey as short as possible to improve completion rates, and deeming that individual attributes are not a critical factor to measure.

Suitability

Education-employment (mis)match

All three instruments further included, though differed, in their approach to assessing graduates' suitability. In the Australian instrument, graduates are asked to use a five-point Likert scale to rate how specific skills or competencies matched to their current employment, such as 'My job requires less education than I have', 'I have more job skills than are required for this job'. Further, if graduates indicated they were over-educated for their current job, a follow-up question asks graduates to indicate what the main reason was for working in a job that does not require their level of education. This single-choice question includes options such as 'No suitable jobs in my local area', 'Caring for children', and 'I'm

Table 5. Suitability summary.

Country	Questions	Response frame	Notes by the authors
Australia	The following statements are about your skills, abilities and education. Please indicate the extent to which you strongly disagree, disagree, neither disagree nor agree, agree or strongly agree with each of these statements.	Eight statements measured on a five-point Likert scale, such as 'My job requires less education than I have', 'I have more job skills than are required for this job' or 'Someone with less education than myself could perform well on my job'	Subjective reasoning is being asked if there is a mismatch
UK	Did you need the qualification that you completed 15 months ago to get the job? (Dependent on routing), Select one option only	Six options to answer with several variations for 'Yes' (i.e., yes, both the level and subject of qualification was a formal requirement; Yes, the level of qualification was a formal requirement; Yes: the subject of the qualification was a formal requirement; Yes: while the qualification was not a formal requirement it did give me an advantage)/'No: the qualification was not required'/'Don't know'	Subjective reasoning is being asked in general
Europe	What level of education is usually required to perform this job?	Options to answer: lower than higher education; short-cycle higher education; Bachelor or equivalent degree; Master or equivalent degree; Doctorate/PhD	Very detailed when it comes to education-employment (mis)match but no subjective reasoning
	Would you say that your current employment is in line with your study programme . . .		
	. . . with regard to professional qualifications (field of study)?	Five-point Likert scale (ranging from 'yes, absolutely' to 'no, absolutely not')	
	. . . with regard to the position?	Nine-point Likert scale (ranging from 'my position is significantly higher' to 'my position is significantly lower'	
	. . . with regard to the level of the work tasks?	Nine-point Likert scale (ranging from 'the level is significantly higher' to 'the level is significantly lower'	

satisfied with my current job'. The instrument also asked graduates whether their current degree level is a formal requirement for their current job, and to what extent it is important for an individual to have the earned degree to be able to do that job.

The UK instrument also asks about education-employment (mis)match; however, in less detail than the Australian instrument. The instrument includes questions about whether the completed qualification was needed to get the current job with several options to answer such as 'Yes: both the level and subject of qualification was a formal requirement'. In addition, in the UK, graduates were asked to reflect on their activity to date with one of the statements being 'I am utilising what I learnt during my studies in my current work'.

In the EU instrument, there is also one section related to suitability, where graduates are asked to indicate what level of education would be required for their current employment (e.g., Bachelor, Masters'). Other questions included, 'Would you say that your current

employment is in line with your study programme . . . ?' with differentiation according to ' . . . with regard to professional qualifications (field of study)?', ' . . . with regard to the position?', and ' . . . with regard to the level of the work tasks?'. One question also was dedicated to what extent does one's current work demand more knowledge and skills than they can offer, measured by a five-point Likert scale. Please refer to Table 5 for a summary.

Satisfaction and wellbeing

Satisfaction, either relating to the job or how the university prepares students for work, is rarely discussed in theoretical models of graduate outcomes, yet was present in all three surveys to some degree. In the Australian and UK instruments, graduates were, for example, asked to indicate their satisfaction of their university experiences, such as the quality of the course or supervision. In the EU context, this was even more comprehensive, with the instrument also asking students to indicate satisfaction with teaching mode and assessment design as well.

Relating to job satisfaction, the Australian instrument asked graduates if they were content with their working hours, as well as their current job. However, this is only asked if graduates indicated they were over-educated for their current job (see also the subsection above) or if they indicated that they are not looking to work more hours. Then a follow-up question asked them to select the main reason for not working more hours ('I'm satisfied with the number of hours I work'). In the UK, these questions are more abstract, with the instrument asking students if their work 'fits with future plans' and 'is meaningful'. The instrument also includes the question, 'On a scale of zero (not at all likely) to ten (definitely), how likely are you to recommend [provider name] to a friend or colleague?' with an open follow-up question to state the reasons for the chosen rate. While the questions of fitting with future plans and meaningful work form part of the core Graduate Outcomes survey, the recommendation questions are only part of the 'opt-in' section and therefore limited to graduates where the provider has asked for this to be part of the survey. In the EU, two questions are directly linked to job satisfaction: 'How satisfied are you with your current work regarding the following aspects?' and 'How satisfied are you all in all with your current work situation?'. Regarding the first question, nine statements can be selected such as 'Working conditions', 'Working hours', 'Salary/revenues', 'Advancement opportunities' and 'Possibility to reconcile work with private life and family'.

Only the UK and EU instruments include questions around graduates' wellbeing. The UK is particularly detailed in this regard with several questions such as 'How satisfied are you with your life nowadays?', 'To what extent do you feel the things you do in your life are worthwhile?', 'How happy did you feel yesterday?', and 'How anxious did you feel yesterday?'. Measuring overall life satisfaction and wellbeing, the EU instrument also includes the question 'All things considered, how satisfied are you with your life as a whole nowadays?' with a ten-point Likert scale ranging from 'extremely dissatisfied' to 'extremely satisfied'. In addition, EU graduates were asked about 'How is your health in general?' (ranging from 'very good = 1' to 'very bad = 5') and 'Do you have any physical or mental health conditions or illnesses lasting or expected to last twelve months or more?' (including the options 'yes' and 'no').

Civic values

Only the EU instrument prompted graduates to indicate to some degree their civic values or engagement. Graduates were asked questions about to what extent environmental sustainability has been a topic in the respective study program. Graduates were also asked about their political attitudes and participation, including their democratic values. To illustrate specific questions included 'How interested would you say you are in politics?' (through a five-point Likert scale) and 'How important is it for you to live in a country that is governed democratically?' (through a 10-point Likert scale). The instrument also sought to measure graduates' attitudes towards climate change through three questions. The first one asks 'You may have heard that the world's climate is changing. Do you think that climate change is caused by natural processes, human activity, or both?' (through a five-point Likert scale). Followed by a second question 'How worried are you about climate change?' and a third one 'How much do you agree or disagree with this statement: There is no point in doing what I can for the environment, unless others do the same.' (both also measured through a five-point Likert scale). With these set of questions, aspects of the social outcomes of higher education are aimed to be measured. To grasp attitudes towards society at large and in line with EU policy (e.g., commitment to Paris Agreement on climate change) these questions are used as indicators of graduates' civic values and societal engagement, which are important aspects of policies regarding the European Higher Education Area (European Commission/EACEA/Eurydice, 2024).

Discussion

The overarching finding from our study was that there are significant differences in the ways in which graduate outcomes were measured across nations, indicating both the broadness of the term itself and the distinct ways in which it can be operationalised. We will now discuss how these differences illuminate the ways in which graduate outcomes are being conceptualised, and what aspects are likely deemed more important in specific contexts.

To begin, in regard to the dimension of human capital, while all three instruments included items related to this lens, they differed significantly. Australia, for example, had comparatively the most in-depth questions related to students' placements, though much of this was asked in an undergraduate version of the instrument that is currently classified as 'opt in' for universities. Still, these questions indicate Australia's national priorities to make placements and WIL activities a key component of the university degree (ACEN, 2024; Universities Accord, 2024; Universities Australia, 2017). The UK instrument meanwhile had a light touch on assessing graduates' placement experiences (as 'opt-in' bank of questions and questions for research graduates only), though it was the only nation to prompt graduates on the duration of placement, which may speak their interest in comparing placement outcomes relative to length. In the UK, additional information on placements can also be linked via the Student Record. The EU instrument also included paid labour experiences, which is likely a key component to understanding student to graduate transitions (Weiss et al., 2014). The inclusion of paid work in the EU instrument further showcases how national strategies shape survey design, as numerous

policies have sought to gain a deeper understanding of the composition of a working student body as more measures targeted at widening participation, increased inclusivity, and life-long learning in higher education systems (as outlined, for example, in the latest Ministerial communiqué of the Bologna Process). The authors here further predict that other national graduate outcomes surveys may follow suit, as research increasingly suggests the balance between study and work may link to students' graduate employment (Masevičiūtė et al., 2018).

Worth noting here as well is the EU unique focus on study abroad. This speaks to the EU program for education, training, youth, and sport (Erasmus+), which has supported millions of individuals to complete international study and was recently re-funded until 2027 (Nogueiro et al., 2022). Focusing on mobility within the EU countries is crucial not only in terms of sharing knowledge and establishing a sense of a European identity, but it is also important in terms of strengthening its economic location and maintaining its competitiveness.

The dimension of suitability followed human capital as being a key area of focus across the instruments. This speaks to the priority of all contexts to assess how the national university system prepares students for the labour market (i.e., work readiness). While the items across all three contexts differed, they were largely similar in their focus to understand if students believed their degree was necessary for their current role and if they were prepared for future career plans moving forward. We caution, however, that the labour market that graduates usually enter, and universities prepare them for, is dynamic and complex. Often, it is not the case that graduates choose to enter jobs that neatly align with gaps in the labour market (Hewitt, 2020). In the UK, for example, the underemployment rate for graduates is around 31% (level of education is higher than required for the job) (Savic, 2019), while skill shortages still persist. Critically, graduates' satisfaction also played a role across all instruments, including general satisfaction in the degree, but in the EU context, for example, also graduates' job satisfaction and satisfaction related to teaching mode and assessment, and in the UK, asking if the degree prepared students for 'meaningful' work. The EU and UK instruments also included questions related to graduates' wellbeing, an emerging area of interest within the scholarly literature (Baik & Larcombe, 2023; Römgens et al., 2020).

How graduates found work, included in the dimension of individual behaviours, also merited inclusion across all three instruments. However, it was only the EU context where the instrument also sought to understand when students began their employment search. It was also only in the EU where graduates were asked not only if they currently volunteered but if they volunteered during their studies as well. Unemployment varies significantly across the European Union, including for university graduates, but these questions may seek to better unpack the factors related to unemployment or underemployment, particularly in countries such as Italy and Greece (European Commission, 2023). This is key as research suggests volunteering as a predictor for successful labour market entry, as well as participation in extra-curricular activities in general (Baert et al., 2016). However, students can only participate in volunteering activities if they have the time and resources to do so, which can put students from equity-deserving backgrounds at a disadvanage (Lessky et al., 2024). We would therefore suggest that extra-curricular activities during studies are measured in future graduate

outcomes surveys, but that such activities should be accompanied with analysing more equity-related data to cautiously monitor potential inequities.

Dimensions that received far less attention in the instruments included social capital and civic values. Social capital items are only related to graduates' course and degree and overlap with individual behaviours, including how they found work. Nevertheless, social capital could be investigated in more detail by, for example, collecting data on networks among students and staff, i.e., with whom information is shared and by whom students feel supported, but also the university's relationships to external social networks, i.e., partnerships between the institution and employers. Research has indicated the significance of factors such as support during study, both emotionally and financially (i.e., lessening the burden to work during studies or worry about food or rent costs), richness of relationships with educators, and peer mentoring for graduate outcomes, especially those from equity-deserving backgrounds (Almeida et al., 2021; Mishra, 2020). All these factors could speak to the social capital acquired during their studies. It is possible that as this scholarship continues to grow, there may be more advocacy for the inclusion of these items. Furthermore, only the EU instrument asked graduates questions related to civic values, namely around their political engagement and around climate change. Missing from all instruments was also the inclusion of individual attributes, such as resilience or personality factors. This too could be an area for future consideration, especially if taken in conjunction with other factors such decision to undertake placements or a global study.

Limitations

The study had a few limitations to address. To keep a clear scope, the research did not investigate longitudinal versions of the instruments, nor one-off questions that were included during the COVID-19 pandemic. The UK instrument also had many open-ended questions asking about the subjective nature of graduates' experiences, which were not included in this analysis.

Conclusion

The increased expectation for universities to prepare students for the labour market warrants greater research on how the fulfilment of this responsibility is measured and assessed. Through our research, we found distinct approaches across Australian, UK and EU contexts. These variations highlight the thriving debate over what are graduate outcomes and the factors in which a university can and should be judged to support such goals. The differences found across the three instruments should raise awareness of the array of possibilities in which graduate outcomes can be measured, which in turn should merit greater methodological considerations into the design of such instruments. Future research should also consider this in the context of aspects such as student diversity to understand how universities play a transformative role in supporting equity-deserving students to achieve career success.

We also find a common tendency among the instruments as they focus on rather narrow economic metrics, such as employment rates, education-employment (mis) match and annual earnings. Such conceptualisations mainly represent a view of higher education as an individual economic investment. Yet many refute this neoliberal lens (e.g., Ball & Olmedo, 2023; Danvers, 2021) and rather position universities as related to the public good, emphasising different impacts of higher education, such as personal development, democracy-related activities (e.g., active citizenship) and sustainable behaviours - which have only been partially included in the intruments (Fryer, 2024). Therefore, while we acknowledge the importance of measuring economic metrics, we also highlight the growing research and policy advancements that see graduate outcomes beyond these metrics (e.g., the United Nations' Sustainable Development Goals (SDGs)). Indeed, for the 'social licence' for universities to continue, and even strengthen, it may be time to think more broadly about the value of higher education.

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References

ACEN. (2024). *ACEN, 2023 member summary report for graduate outcomes survey items*. Accessible at: https://acen.edu.au/wp-content/uploads/2024/07/ACEN-member-report-2024-final.pdf

Albert, C., Davia, M. A., & Legazpe, N. (2023). Educational mismatch in recent university graduates. The role of labour mobility. *Journal of Youth Studies*, *26*(1), 113–135. https://doi.org/10.1080/13676261.2021.1981840

Almeida, D.J., Byrne, A. M., Smith, R. M., Ruiz, S. (2021). How relevant is grit? The importance of social capital in first-generation college students' academic success. *Journal of College Student Retention: Research, Theory & Practice*, *23*(3), 539–559. https://doi.org/10.1177/1521025119854688

Australian Graduate Outcomes Survey. (2021). Accessible at: https://qilt.edu.au/docs/default-source/default-document-library/2023-gos-national-report.pdf?sfvrsn=5925e306_2

Baert, S., Rotsaert, O., Verhaest, D., & Omey, E. (2016). Student employment and later labour market success: No evidence for higher employment chances. *Kyklos*, *69*(3), 401–425. https://doi.org/10.1111/kykl.12115

Baik, C., & Larcombe, W. (2023). Student wellbeing and students' experiences in higher education. In *Research handbook on the Student experience in higher education* (pp. 74–88). Edward Elgar Publishing. https: //doi. org/4337/9781802204193.00013

Ball, S.J., & Olmedo, A. (2023). Care of the self, resistance and subjectivity under neoliberal governmentalities. In Bronwen M.A. Jones & Stephen J. Ball (Eds.), *Neoliberalism and education* (pp. 131–142). Routledge.

Becker, G.S. (2009). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). University of Chicago Press.

Behle, H. (2021). Taking stock: Employability as an outcome of higher education. Evaluating developments in the German higher education system. *Higher Education Quarterly*, *75*(4), 562–574. https://doi.org/10.1111/hequ.12318

Bennett, D., Knight, E., & Li, I. (2023). The impact of pre-entry work experience on university students' perceived employability. *Journal of Further and Higher Education*, *47*(8), 1140–1154. https://doi.org/10.1080/0309877X.2023.2220286

Berg, J.M., Dutton, J. E., & Wrzesniewski, A. (2013). Job crafting and meaningful work. In B. J. Dik, Z. S. Byrne, & M. F. Steger (Eds.) *Purpose and meaning in the workplace* (pp. 81–104). American Psychological Association.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood.

Challice, G., Bolton, L., Vickers, N., Morrison, J., Williams, B., Spencer, L., Reading, E., Kim, C., Desta, B., Mohib, J., Feng, J., Hand, L., Habibeh, R., Begovis, A., Kim, S., & Winterton, C. (2024). *2023 graduate outcomes Survey. National report: Short-term graduate outcomes in Australia*. Quality Indicators for Learning and Teaching (QILT).

Clarke, M. (2018). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in Higher Education*, *43*(11), 1923–1937. https://doi.org/10.1080/03075079.2017.1294152

Danvers, E. (2021). Individualised and instrumentalised? Critical thinking, students and the optics of possibility within neoliberal higher education. *Critical Studies in Education*, *62*(5), 641–656. https://doi.org/10.1080/17508487.2019.1592003

Dollinger, M., Corcoran, T., Jackson, D., & O'Shea, S. (2024). Employability for inclusion: The urgent need for a biopsychosocial model perspective. *Journal of Higher Education Policy and Management*, *46*(2), 113–130. https://doi.org/10.1080/1360080X.2023.2258324

English, P., de Villiers Scheepers, M. J., Fleischman, D., Burgess, J., & Crimmins, G. (2021). Developing professional networks: The missing link to graduate employability. *Education+Training*, *63*(4), 647–661. https://doi.org/10.1108/ET-10-2020-0309

EUROGRADUATE. (2022). Accessible at: https://op.europa.eu/en/publication-detail/-/publication/8f748637-d079-11ea-adf7-01aa75ed71a1/language-en

European Commission. (2023). Accessible at: https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240821-1#:~:text=The%20overall%20employment%20rate%20of,%25)%20and%20Romania%20(74.8%25

European Commission/EACEA/Eurydice. (2024). *The European higher education area in 2024. Bologna process implementation report*. Publications Office of the European Union. European Education and Culture Executive Agency.

European Statistical System. (2019). *Quality assurance framework of the European statistical system*. Accessible at: https://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646

Fryer, T. (2024). A scoping review of the graduate outcome literature. *Widening Participation and Lifelong Learning*, *26*(2), 182–206. https://doi.org/10.5456/WPLL.26.2.182

Glover, D., Law, S., & Youngman, A. (2002). Graduateness and employability: Student perceptions of the personal outcomes of university education. *Research in Post-Compulsory Education*, *7*(3), 293–306. https://doi.org/10.1080/13596740200200132

Grosemans, I., De Cuyper, N., Forrier, A., & Vansteenkiste, S. (2023). Graduation is not the end, it is just the beginning: Change in perceived employability in the transition associated with graduation. *Journal of Vocational Behavior*, *145*, 103915. https://doi.org/10.1016/j.jvb.2023.103915

Hauschildt, K. (2024). Social and economic conditions of Student life in Europe: Eurostudent 8 synopsis of indicators 2021–2024. https://doi.org/10.3278/6001920ew

Hewitt, R. (2020). *Getting on: Graduate employment and its influence on UK higher education: HEPI report 126*. Higher Education Policy Institute.

Jackson, D., & Collings, D. (2018). The influence of work-integrated learning and paid work during studies on graduate employment and underemployment. *Higher Education*, *76*(3), 403–425. https://doi.org/10.1007/s10734-017-0216-z

Jackson, D., & Tomlinson, M. (2022). The relative importance of work experience, extra-curricular and university-based activities on student employability. *Higher Education Research & Development*, *41*(4), 1119–1135. https://doi.org/10.1080/07294360.2021.1901663

Jackson, D., & Wilton, N. (2017). Perceived employability among undergraduates and the importance of career self-management, work experience and individual characteristics. *Higher Education Research & Development*, *36*(4), 747–762. https://doi.org/10.1080/07294360.2016.1229270

Lessky, F., Freudhofmayer, S., Fellner, M., & Resch, K. (2024). Student civic engagement practices from an equity perspective: Case studies from Austrian universities. In C. Stone & S. O'Shea (Eds.), *Research handbook on Student engagement in higher education* (pp. 302–315). Edward Elgar Publishing.

Lessky, F., & Unger, M. (2022). Working long hours while studying: A higher risk for first-in-family students and students of particular fields of study? *European Journal of Higher Education*, *13*(3), 347–366. https://doi.org/10.1080/21568235.2022.2047084

Marginson, S. (2019). Limitations of human capital theory. *Studies in Higher Education*, *44*(2), 287–301. https://doi.org/10.1080/03075079.2017.1359823

Masevičiūtė, K., Šaukeckienė, V., & Ozolinčiūtė, E. (2018). *Combining studies and paid jobs. Thematic review*. German Centre for Research on Higher Education and Science Studies (DZHW).

Mayring, P. (2021). *Qualitative content analysis: A step-by-step Guide*. SAGE Publications Ltd. https://www.torrossa.com/it/resources/an/5282250

Mishra, S. (2020). Social networks, social capital, social support and academic success in higher education: A systematic review with a special focus on 'underrepresented' students. *Educational Research Review*, *29*, 100307. https://doi.org/10.1016/j.edurev.2019.100307

Mtawa, N., Fongwa, S., & Wilson-Strydom, M. (2021). Enhancing graduate employability attributes and capabilities formation: A service-learning approach. *Teaching in Higher Education*, *26*(5), 679–695. https://doi.org/10.1080/13562517.2019.1672150

Mühleck, K., Meng, C., Unger, M., & Hoffstätter, U. (2021). *EUROGRADUATE Pilot survey, 2018: Data and methods report on the EUROGRADUATE Pilot survey conducted in 2018/2019*. German Centre for Higher Education Research and Science Studies (DZHW).

Nogueiro, T., Saraiva, M., Jorge, F., & Chaleta, E. (2022). The Erasmus+ programme and sustainable development goals-contribution of mobility actions in higher education. *Sustainability*, *14*(3), 1628. https://doi.org/10.3390/su14031628

Peña-González, K., Nazar, G., & Alcover, C. M. (2021). The mediating role of organizational identification in the relation between organizational social capital, perceived organizational prestige, perceived employability and career satisfaction. *The Spanish Journal of Psychology*, *24*, 1–16. https://doi.org/10.1017/SJP.2021.24

Pham, T. (2021). Reconceptualising employability of returnees: What really matters and strategic navigating approaches. *Higher Education*, *81*(6), 1329–1345. https://doi.org/10.1007/s10734-020-00614-2

Pham, T., & Jackson, D. (2020). The need to develop graduate employability for a globalized world. In *Developing and utilizing employability capitals* (pp. 21–40). Routledge. https://doi.org/10.4324/9781003004660-1

Robson, J. (2023). Graduate employability and employment. In *Assessing the contributions of higher education* (pp. 177–196). Edward Elgar Publishing. https://doi.org/10.4337/9781035307173.00019

Römgens, I., Scoupe, R., & Beausaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, *45*(12), 2588–2603. https://doi.org/10.1080/03075079.2019.1623770

Savic, M. (2019). *Overeducation and hourly wages in the UK labour market; 2006 to 2017*. Office for National Statistics. https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/compendium/economicreview/april2019/overeducationandhourlywagesintheuklabourmarket2006to2017

Small, L., McPhail, R., & Shaw, A. (2022). Graduate employability: The higher education landscape in Australia. *Higher Education Research & Development*, *41*(3), 919–933. https://doi.org/10.1080/07294360.2021.1877623

Social Research Centre (2024): *2023 Graduate outcomes survey. Methodological report*. QILT, Social Research Centre.

Souto-Otero, M., & Białowolski, P. (2021). Graduate employability in Europe: The role of human capital, institutional reputation and network ties in European graduate labour markets. *Journal of Education & Work*, *34*(5–6), 611–631. https://doi.org/10.1080/13639080.2021.1965969

Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training*, *59*(4), 338–352. https://doi.org/10.1108/ET-05-2016-0090

Tomlinson, M., & Jackson, D. (2021). Professional identity formation in contemporary higher education students. *Studies in Higher Education*, *46*(4), 885–900. https://doi.org/10.1080/03075079.2019.1659763

Tomlinson, M., & Nghia, T. L. H. (2020). An overview of the current policy and conceptual landscape of graduate employability. In Tran Le Huu Nghia, Thanh Pham, Michael Tomlinson, Karen Medica, & Christopher Thompson (Eds.), *Developing and Utilizing Employability Capitals* (pp.1–17). https://doi.org/10.4324/9781003004660

Tran, L.T., Ngo, N. T. H., Nguyen, H. T. M., Le, T. T. T., & Ho, T. T. H. (2022). "Employability in context": Graduate employability attributes expected by employers in regional Vietnam and implications for career guidance. *International Journal for Educational and Vocational Guidance*, *24*(2), 1–21. https://doi.org/10.1007/s10775-022-09560-0

United Kingdom's Graduate Outcomes Survey. (2022). Accessible at: https://www.hesa.ac.uk/files/C22071%20Graduate%20Outcomes%20survey%20%28survey%20in%20full%29.pdf

Universities Accord. (2024). https://www.education.gov.au/australian-universities-accord/resources/final-report

Universities Australia. (2017). https://universitiesaustralia.edu.au/wp-content/uploads/2022/03/WIL-in-universities-final-report-April-2019.pdf

Vu, T., Ferns, S., & Ananthram, S. (2022). Challenges to international students in workintegrated learning: A scoping review. *Higher Education Research & Development*, *41*(7), 2473–2489. https://doi.org/10.1080/07294360.2021.1996339

Weiss, F., Klein, M., & Grauenhorst, T. (2014). The effects of work experience during higher education on labour market entry: Learning by doing or an entry ticket? *Work, Employment and Society*, *28*(5), 788–807. https://doi.org/10.1177/0950017013506772

Whiteley, S., Bricknall, R., Iarossi, D., & Grisdale, J. (2016). *2016 graduate outcomes survey methodological report*. The Social Research Centre.

Wright, E., & Mulvey, B. (2021). Internships and the graduate labour market: How upper-middle-class students 'get ahead'. *British Journal of Sociology of Education*, *42*(3), 339–356. https://doi.org/10.1080/01425692.2021.1886051

Appendix

Summary of historical context of surveys and context specific information of current instrument

Regarding the history of the three selected surveys, the Australian GOS was first implemented in 2016. However, previous versions (i.e., the Australian Graduate Survey (AGS) and the Graduate Destinations Survey (GDS)) had been in place since the 1970s (further information see Challice et al., 2024 and Whiteley et al., 2016). In the UK, data about graduate outcomes was collected via the Destination of Leavers from Higher Education (DLHE) survey since the early 1990s. A fundamental review of the data collected in 2015 has resulted in the development of the current UK Graduate Outcomes survey, which was first commenced in 2017/2018 (for further information see Hewitt, 2020). The European survey is the youngest of the three surveys and was initiated by the European Commission. It has piloted in 2018 to collect country-comparative data within the European Union (Mühleck et al., 2021). All three instruments serve the overall goal to measure short- and medium-term graduate outcomes including longitudinal perspectives.

GOS - Australia

The 2022 Australian GOS was conducted on behalf of the Australian Government Department of Education by the Social Research Centre. It is a component of the Quality Indicators for Learning and Teaching (QILT) suite of surveys. The broad aim is to measure the short-term labour force outcomes achieved by graduates of Australian higher education institutions approximately four to six months post completion of their undergraduate or postgraduate (coursework or research) award (for further information see the methodological report by Social Research Centre, 2024). The questionnaire was based on the 2021 instrument and includes modules with the following thematic areas: labour force, further study, graduate attributes (overall satisfaction), graduate preparation and other additional items.

GOS - UK

Graduate Outcomes in the UK is a survey, which first commenced with the 2017/18 academic year's graduate population and is released annually. Graduate Outcomes survey data covers UK higher education providers (HEPs) and further education colleges (FECs) in England, Wales and Northern Ireland. The data is collected approximately 15 months after higher education course completion. The survey is delivered by HESA (Higher Education Statistics Agency) and consists of optional and mandatory questions as well as a set of opt-in question banks. It includes questions about graduates' employment; (further) study, training or research; reflections on activities to date; subjective wellbeing. Opt-in questions include information about finding the job, reflections on graduate choice, research students, newly-qualified teachers and career services. As there is a single body (HESA) that collects data from all providers across the UK, this body also holds the administrative data on students from all providers. This includes information on their demographic/course characteristics, as well as other aspects of their study (e.g., whether they were on a course with an industrial placement/study abroad period). As a result, such questions are not included in the survey, as these can be readily linked to via the Student record.

EUROGRADUATE - EU

The EUROGRADUATE project is in its second phase of the European pilot survey of higher education graduates. The goal is to create and implement a regular, comprehensive, comparable and longitudinal European data collection on higher education graduates. It is part of the European Graduate Tracking Initiative of the European Commission, funded by the Erasmus+ program and carried out by an international consortium (for further information see https://www.eurograduate.eu). The data are collected approximately 12 to 15 months and 5 years after higher education course completion (two cohorts). The 2022 questionnaire covers a range of topics reflecting the graduates' personal and social background, their educational career, the transition to work and their work history, their skills and job satisfaction as well as social outcomes. The questionnaire is split in three modules: essential (module A), recommended (module B), and optional information (module C). The essentials are covered by all 17 participating countries, whereas module B is additionally covered 14 and module C by nine countries. There are two questionnaires, the first for the cohort one year after graduation and the second for the cohort five years after graduation. We chose the first as it is more compatible with the timeframe of the AU GOS (i.e., four to six months after graduation) and the UK GOS.