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**The end of the road? A critique of the nascent trend of secondary education transition metrification**

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**Abstract**

*This paper identifies a nascent trend developing destinations metrics for graduates of secondary education in several countries, with policy ambitions to support pupil-level decision making and drive provider-level accountability. This trend follows the development of such metrics for tertiary education graduates and a policy direction of data visibility and data engineering to support labour market objectives, via a vector of change that privileges financial factors in career decision-making. Reforms in England are identified as an example of extreme practice, illustrating the practical potential of such data as well as potential pitfalls. Building on the pre-existing critique, the authors highlight three new biases particularly prevalent in the new metrics: bias for continued education, bias for more stable, traditional forms of employment that disadvantages particular sectors, and bias for a provider-centric view of outcomes. Mitigations via an enhanced role for adolescent career counselling are discussed.*

**Keywords**: School-to-work transitions, destinations metrics, school choice, accountability frameworks, career counselling

The potential for provider-level metrics in the education system to drive behaviour can be seen at the policy-level, the provider-level and the pupil-level (see, for instance, Custer, King, Atinc, Read, & Sethi, 2018; Hanushek & Raymond, 2005; as well as research acknowledging mitigating factors, e.g. Briggs, 2007; Janssens, 2011). “Achievement metrics”, such as course completion rates and course grades are particularly common, being generally available in a straightforward way to individual education providers. This paper explores the growing use of another category of provider-level metrics, “destination metrics”, which seek to understand what happens to students after they complete a particular stage of education at a particular provider.

In recent years, destination metrics – particularly those focused on employment outcomes – have become widespread in the tertiary education systems of developed countries; for instance, graduate employment rates feature in the global ranking of universities by QS (QS, 2018). Given the influence and limitations of such metrics, it is unsurprising that they have attracted significant critical commentary and analysis, operating as they do from a performative notion of governmentality towards youth employment, pathologizing any experience of unemployment as a problem for which individual pupils and their most recent education providers shoulder the majority of the blame (Avila & Rose, 2019; Simmons & Thompson, 2013; Tomlinson, 2012).

Some countries, as demonstrated by this paper, are increasingly experimenting with extending the coverage of such destination metrics to general secondary education, creating new transparency on what happens to the graduates of individual upper-secondary education providers after age 18. As a newer trend, the phenomenon in secondary education has not been researched to the same level of detail as in tertiary education – indeed, an earlier study commissioned by the Welsh government bemoaned the limited use that had been made of post-secondary destinations data to date and the little information available about practice in different countries (Old Bell3 Ltd, 2012). Nonetheless, such data has significant potential not only to increase our understanding of school-to-work transition but also to shape how such transitions are navigated by individual pupils, particularly for those who enter the workplace directly after secondary education. This is often a significant proportion of young people, there being typically 21%-33% more students in OECD countries enrolled in education aged 17 than aged 19 as given by the interquartile range across 38 countries using 2016 data (OECD, 2019).

The contribution of this paper is to elaborate a critical synthesis on ~~draw attention to~~ this trend at an early stage, while several policies remain at the proposal stage in several countries and the metrics in question remain experimental or under development. The use of such data is being explored particularly vigorously in the English education system, which is presented in this paper as a case study for understanding the potential limitations and biases of such data. Before presenting the examples of emerging practice, we summarise the context for these new secondary education destination metrics: the primary policy motivations for them and the tertiary education destination metrics that already exist, as well as the existing critiques of this policy context. Having summarised the existing critiques and described the emerging case studies, we draw attention to three additional types of bias that represent a particular risk for these new metrics and their application: (i) a bias for continued education against early entrance into the labour market; (ii) a bias for more stable, traditional forms of employment that disadvantages particular sectors and styles of working, such as more entrepreneurial careers; and (iii) a bias for a provider-centric view of outcomes, that sees the choice of education provider as a dominant factor in determining personal outcomes. ~~We hope~~ Our aim is to develop t~~hat~~ a better understanding of these metrics and their limitations, not only helps adolescent career counselling make more appropriate, contextualised use of them in supporting school-to-work transition, but also helps governments and campaigners identify avenues for improving the data available, with examples provided in this article.

**Context for reform**

*Policy concern about school-to-work transitions*

Researchers have identified long term structural changes in the operation of the labour market which result in increased complexity, competition and change, and which work against the interests of young people: technological change, globalisation, deregulation, inequality (Mann & Huddleston, 2017). Similar issues and the need for policy change and increased efforts by schools and colleges to support transitions have been identified by a range of policy makers and policy advisory units (e.g. DfE, 2017; OECD, 2018; ILO, 2018). While the exact emphases vary from state to state and over time, policymakers are typically trying to solve for various complex and inter-connected economic policy issues, such as youth unemployment, low productivity, and skills shortages in strategic sectors.

 A longer historical perspective reveals that such concerns are neither unique to, nor even necessarily uniquely challenging in the modern era, although this need neither meaningfully reduce the risks they pose today nor mitigate the need for action. For instance, concerns in the late 20th century and the turn of the millennium regularly highlighted the rapid pace of change in the workplace and the difficulties this caused for school-to-work transition, whether it was the “kaleidoscopic” context of today’s workplace in which “ambiguity is the only certainty” as described by Kerka (1995), the “new rules of work” (Hall & Mirvis, 1995) or the “new era” since the rapid change of the 1980s of Gothard, Mignot, Offer, & Ruff (2001). Indeed, concerns about pressures on the education system and the need to meet changing labour market requirements can be found in many major phases of technological and societal development (e.g. in the 19th century Europe and N. America: Carl, 2009; 20th century America: Tyack & Cuban, 1995; 20th century China: Murphy, 2004).

*Data collection and transparency as part of the policy response*

New Public Management (Vigoda, 2003) reconfigures public service as a fundamentally measurable exercise, based on key performance indicators and regular tracking, and prioritises institution- and individual-level accountability to drive system change above the connections between institutions or their embedded social context. Policy approaches to labour market and education system management have widely adopted this data-based methodology, drawing on both static data (which provides a snapshot of current circumstances) and dynamic data (which provides insight on change over time).

 Traditional labour market information (LMI) is an example of static data, providing detail on experiences and outcomes in different geographic and sectoral areas of the labour market at a point in time. Investing in systems to collect and exploit LMI has become an important part of the policy landscape for improving labour market outcomes, aspiring to use data-based insights to direct the skills system and individual labour market participants to where they are most needed (e.g. Woods & O’Leary, 2006; Řihova, 2016; Bimrose et al, 2018; Mehotra, 2014).

 Education transition metrics or pathway analyses are examples of dynamic data, in which particular education choices or outcomes are related to average labour market outcomes. Such data have long been analysed at the supra-provider level, drawing on ad hoc or periodic surveys, aggregated to regional or national level to draw generic insights that might later be applied to policies that affect individual providers or inform individual career decision making. The ability to operationalise such data at provider-level is a natural extension of this approach to system management, once the infrastructure and resources are in place to enable systematic and periodic data collection, and especially in countries where there is a tradition of making provider-level data publicly available (e.g. in systems with education “league tables”).

*Tertiary education destination metrics*

International university rankings provide an example of how provider-level destinations metrics are used and the growing interest in such data. The QS Graduate Employability Rankings began as a pilot in 2015/16 and ranked around 500 universities in 2018/19 based on five factors (QS, 2018): “employer reputation” surveying about 40,000 employers about the employability of graduates from different providers (30%); “alumni outcomes” identifying the former university of some 30,0000 individuals listed in various third-party success rankings (25%); “employer partnerships” based on jointly published research and work-placement partnerships (25%); “employer/student connections” based on the number of individual employers actively present on university’s campus over the previous 12 months (10%); and “graduate employment rate” within 12 months of graduation, normalised against each country’s average (10%). Most of these metrics are time intensive to research, relying on bespoke surveys or provider-by-provider research. Times Higher Education has also started exploring global employability rankings, partnering with an HR consultancy to survey recruiters and ranking about 250 universities from 41 different countries (“Best Universities,” 2018).

 Within individual countries, richer provider-level destinations metrics are typically available. Zippia, in the United States, has ranked universities based on their job placement ratings and salaries for students 10 years after graduation, drawing on the Integrated Postsecondary Education Data System (IPEDS), a collection of surveys from the National Center for Education Statistics that any college or university with federal funding has to complete (Brown, 2018). In Australia, the Graduate Outcomes Survey provides insight on employment rate and salary by individual provider or by course (Singhal, 2019). Similar data on UK universities have historically been gathered by HESA and purchased by newspapers to create league tables via the Destinations of Leavers from Higher Education (DLHE) surveys, replaced in 2018 by the Graduate Outcomes Survey.

A direction of travel towards greater information availability can also be identified within countries. For instance, the Longitudinal Educational Outcomes (LEO) study was formally launched in 2015 in England to link together administrative datasets from different government departments, incorporating state welfare claims, education activity, and income/taxation data. The dataset has been used to analyse the wage benefits of higher education controlling for earlier educational outcomes (DfE, 2019). Canada is also exploring the creation of similar linked, longitudinal administrative datasets, under the banner of the Education Longitudinal Linkage Platform (Finnie, Mueller, & Sweetman, 2018). Since 2017, all tertiary providers in New Zealand have had to publish information about the employment status and earnings of their graduates, as part of a broader move under the umbrella of “integrated data infrastructure” (“Integrated Data Infrastructure,” 2018) to create richer, longer-term datasets (Earle, 2018; Smyth, 2018). In 2011 the US began using “gainful employment metrics” to present and analyse institution-level data on factors like debt levels, expected earnings after graduation, completion rates, program cost, accreditation, and consistency with licensure requirements (U.S. Department for Education, 2018).

Some countries, such as Germany, have provider-level data but prefer not to make it publicly available (Schomburg, 2016). However, other countries that have traditionally been reluctant to support public-facing league tables, such as France, have begun to use post-graduation earnings data for higher education rankings. Information requests permissible under the 2007 Universities’ Freedoms and Responsibilities Law made it possible to rank French universities by postgraduate students’ employment rates for the first time in 2010 (Marshall, 2010).

**Existing critique summary**

*Concerns over New Public Management and neoliberalism*

Even assuming good and appropriate data are available, there are general concerns over the metrics-driven approach of New Public Management and the common concomitant neoliberal assumptions about individual accountability, while acknowledging that definitions and implementations of this broad philosophy varies widely (Dent, Chandler & Barry, 2004). Concerns include de-professionalisation of staff, de-personalisation of beneficiaries, reduced workforce morale, and ultimately the limited ability of quasi-marketisation, accountability metrics and audits to deliver sustained improvements. The elevation of financial metrics above other metrics also raises concern about the relative de-prioritisation of wellbeing and sustainability, as well as social and cultural value more generally (Glennister, 1991; Dynan & Sheiner, 2018).

 Within the context of education destination metrics, there are worrying assumptions concerning the nature of the problem “to be fixed”, about whose “fault it is”, and how to “change people” given perspectives on how they (should) make decisions and engage with information, such as described in the context of careers education (Hughes, Meijers, & Kuijpers, 2015). For instance, youth unemployment is pathologized in all circumstances – no-one should ever be unemployed – and resolutions lie in the young people themselves and their most recent education provider (Avila & Rose, 2019; Simmons & Thompson, 2013; Tomlinson, 2012; Maguire & Huddleston, 2009).

This approach to policy often envisages directing employment to the “right” strategic sectors for a country (BEIS, 2017), but with only very simplistic understanding of how individuals make labour market decisions. One underlying assumption is that by providing high-quality education pathways, promoting information about sector skills shortages and sharing insights about wage returns, that adults will retrain and young people will choose routes that support employment in those sectors. However, decades of efforts in the STEM sector (science, technology, engineering and maths) have paid little dividend in the UK, in part due to a lack of coherence of approach and an insufficiently robust theory of change (NAO, 2018). By contrast, behavioural economic and sociologically derived discussions of career choice suggest that there is far more to such choices and to subsequent job satisfaction, well-being and social value than employment status or salary level (Blustein, 2019; Behavioural Insights Team, 2016).There appears to be more to the focus on employment and salary than simple data availability, although ease of collection is a factor. In the UK, for instance, the aforementioned DLHE survey on university graduates contains insights on career and life satisfaction, retrospective perspectives on the value of their education, and insights on consistency of role over time; however, the only data used at scale in ranking and evaluating providers have been data on employment status and salary outcomes.

*Concerns over tertiary education destination metrics*

Putting to one side conceptual concerns over a metrics-driven approach, there are concerns over the appropriateness of how destination metrics have been applied and interpreted in tertiary education, recognising the ambiguity in attempting to define and contribute to a broader concept like employability and employability skills (Cranmer, 2006; Cole & Hallett, 2019; Priest, 2019).

 Universities UK (2019) collated a list of limitations of the major employment and salary dataset that has recently become available in the UK, the LEO study mentioned above, many of which apply to general efforts to analyse tertiary education destination metrics. Their concerns are primarily the use of such data to inform policy on how universities are funded and on implicit university rankings, with issues including the lack of ability to identify per-hour earnings or the distinction between part-time and full-time employment; the lack of ability to adjust earnings for the cost of living in a different regions; the multi-year lags in data becoming available; the fact that employment/wage outcomes are highly driven by a variable, external labour market; and certain sample exclusions, such as those who leave the labour force or emigrate. More generally, the use of historical datasets to understand present and future trends is often not as strongly caveated as it needs to be and may be weighted too highly in decision-making, being speciously clearer and more conclusive than other assessments of trends or possible future scenarios.

Where earnings and employment data are aggregated at a university level, there are also concerns that such statistics primarily reflect the social capital and prior attainment of their entry cohorts, in what locations graduates tend to work, or the balance of subjects studied at that university, rather than the quality of teaching, resources or facilities at the university (Blackmore, Blackwell, & Edmondson, 2006; Knight, 2001; Morley, 2001). For instance, universities that produce more law and finance graduates might be expected to have higher average earnings than universities that specialise in initial teacher training, but this is a poor reason to praise the former or to urge teachers to retrain as lawyers.

LEO is nonetheless an improvement in some respects on most other datasets in this domain, which tend to focus on short-term outcomes, such as employment or earnings outcomes six months or 12 months after graduation (Harvey, Locke, & Morey, 2002), although even such medium term measures of employment outcomes may prove inadequate. David Willetts, a UK minister formerly involved with LEO, has argued that even extending earnings analyses through 5-7 years can be inadequate to capture the longer-term pay-off from certain arts courses and subsequent careers (Willetts, 2019). Recognising some of these issues in implementation, while also the potential benefits of such metrics, researchers in the US have recommended that a mix of labour market metrics should be adopted to assess higher education, so as to balance out the inevitable bias caused by focusing on just one or two metrics (Minaya & Scott-Clayton, 2018). Labour market metrics are found to provide distinctive, and hence potentially valuable information in addition to students’ academic outcomes, but with significant sensitivity to the type of metric chosen and the length of follow-up.

**Emerging practice**

*Increasing availability of secondary education destination metrics*

There are ambitions and efforts among sector leaders in several developed countries to enable an assessment at the individual education provider level of average destinations and outcomes for those completing upper secondary education. Such activities build from a very low base of data availability, but point towards an emerging probable direction of travel. In addition to the case study in England that follows, examples are identified in New Zealand, Australia, and across the European Union.

Since 2014, every New Zealand school with upper secondary education graduates has been given information on the tertiary education enrolment of their school leavers for one, two and three years after they finish school, split by level of tertiary education study and type of institution, by gender, and by ethnic group. This information was made publicly available by school in 2016 ([www.educationcounts.govt.nz/find-school](https://www.educationcounts.govt.nz/find-school)), with data on enrolment, suspensions/expulsions, retention and qualification outcomes. Those who go directly into the workplace or into unemployment are all found in a residual category for those not progressing to tertiary education. Government proposals from 2016 reveal that the main motivations for this are “to support schools to engage with their communities, employers and tertiary education providers to improve student outcomes”, as part of efforts to “help students make well-informed, timely decisions about their career pathways, and incentivise education providers (both schools and tertiary providers) to build stronger connections with employers” (Office of Tertiary Education, Skills and Employment; Office of Education, 2016).

The State of Victoria, Australia has had secondary school leaver destination surveys in place since 2003, to identify activities at six months post-graduation (the “On Track” survey). The State’s Economic, Education, Jobs and Skills Committee argued in 2018 for an increase in ambition, proposing that higher quality data be gathered via linking state datasets rather than using opt-in surveys, and that the time horizon be extended to include one and five years post-graduation (EEJS, 2018). Data on individual schools can be downloaded, with statistics for the response rate and the percentages who are employed, looking for work, enrolled in bachelors courses (or have deferred places), enrolled in technical or vocational courses, and studying as apprentices or trainees.

Most European countries do not currently provide destinations metrics for general secondary education, although Williamson and Rodeiro (2017) have noted that the Bologna and Copenhagen processes in the EU and the reforms which have followed have increased motivation to monitor student destinations in Europe. Exceptions include Estonia, widely regarded for the extent of its online public services (Cedefop, 2017), which requires TVET providers to gather data on employment status outcomes six months post-graduation and which publishes the percentage of pupils in general secondary schools who continue their studies at university on a state-funded place (available online by school from [www.ehis.ee](http://www.ehis.ee)) (Irs & Turk, 2012).

The EU has identified a strategic need to improve the usage of “tracer studies”, that is surveys after pupils have left particular stages of education, as part of improving efforts to plan skills and match labour market supply and demand. The 2016 guide to tracer studies commissioned by the European Training Foundation acknowledges that tracer studies are widespread in higher education but less common in TVET, which is the priority of the guide (Schomburg, 2016). The guide notes that there is new demand for “tracer studies”, due to priorities around reaccreditation, quality management, legal changes and demand from donor agencies. However, many of the tracer studies that take place currently do not allow – for reasons of sample size or policy – public analysis of institution-level data, such as in Germany for higher education or the Netherlands for secondary education (Schomburg, 2016).

One example of a centrally funded pilot project in the EU to improve TVET destinations data is the Traktion project (2017-2020), co-funded by the Erasmus+ Programme. Traktion brings three secondary education TVET providers in Estonia, the Netherlands and Italy together with sector experts to develop new processes and guides for tracking leavers and building alumni networks ([tracktionerasmus.eu/project-information](https://tracktionerasmus.eu/project-information/)). The project is a response to recommendations and indicators identified by EU Quality Assurance in VET (EQAVET; [www.eqavet.eu](http://www.eqavet.eu/)) and intends to help TVET schools better understand school-to-work transitions and the impact of their learning on graduates’ careers, They identify that existing national graduation surveys in the EU often cannot be linked back to the institution and, when they do, tend not to trigger action to better support student preparation and decision-making. Ambitions for better destinations tracking can also be found reviews commissioned by the Welsh Assembly Government (Edwards, Saunders, & Hughes, 2010).

*Case study on recent reforms in England*

The Department for Education in England published provider-level Key Stage 4 (age 14-16) and Key Stage 5 (age 16-18) “destination measures” as experimental statistics for the first time in 2012, linking together various administrative datasets to describe what happened to students after each stage of education (DfE, 2015). The first set of statistics stated the percentage of students within each education provider who stayed in education and the percentage participating in training via an apprenticeship or work-based learning, including only participation that had been sustained for at least two academic terms/semesters. The data related to students who were in the last year of the completed education phase in 2008/09 and referred to their destinations during the 2009/10 academic year. Concerns over small sample sizes in some cohorts were handled through such measures as rounding to the nearest 5 or 10 and suppressing metrics based on 5 or fewer students. In subsequent years, additional experimental statistics were added, culminating in 2018 in the publication of a good practice guide for schools (DfE, 2018). At this stage, provider-level data could be accessed, via www.compare-school-performance.service.gov.uk, for the vast majority of secondary education providers in England, including descriptive data on the cohort, such as gender, special education needs, and levels of disadvantage, alongside more traditional measures of academic achievement and exam grade value-added.

Post-16 destinations are broken down by sustained participation in (a) apprenticeships, (b) further education destinations, (c) state-funded school sixth forms, (d) sixth form colleges, (e) other education destinations, (f) employment, (g) unknown destination, and (h) NEET (not in education, employment or training). Post-18 destinations are broken down by sustained participation in (a) apprenticeships, (b) continued education at Level 3 and below (i.e. equivalent to AS-level or A-level qualifications, commonly taken aged 16-18), (c) continued education at Level 4 and above, (d) studying at a “top third university” (i.e. universities whose entrants are in the top third nationally by prior attainment), (e) studying at the Universities of Oxford or Cambridge, (f) studying at a Russell Group university (a UK grouping of research-intensive universities), (g) other education destinations, (h) employment, (i) unknown destinations, and (j) NEET at some point from October to March and/or claimed out-of-work benefits at some point during the destination year. All of these metrics are available separately for “disadvantaged pupils”, defined as those who were eligible for free school meals at any point in the previous six years (effectively a proxy for their parents being on state welfare) or having been looked after continuously by local government (as opposed to their parents or guardians) for at least six months.

The provider-level data made publicly available in England goes beyond the previous examples in several areas. Other examples provided, at best, data on progression post-18 only, following the completion of upper secondary education; England also provides data on transitions after the national exams aged 16. While this is a common transition point in some education systems, it is important to highlight that not every country has such a transition point and countries with more structurally tracked education systems, like German, Austria or the Netherlands, might naturally examine different transitions and destination metrics. The varied range of destination types in the English data is also a distinction, albeit one that partly reflects the heterogeneity of education providers at 16-18 and post-18. For instance, other examples identified did not create such detailed hierarchies of higher education providers among the post-18 destinations. More striking – and more comparable between countries with different education systems - is the breakdown by pupil disadvantage. While destination analyses by student characteristic are relatively commonplace in developed countries at the national or regional level, the authors are not aware of other countries providing such data at the provider-level. New Zealand also stands out in providing destinations data broken down by gender and ethnicity, which is not available in the English data.

The stated policy goal of the Department for Education is consistent with the narrative in other countries. The data are published in order to “provide clear and comparable information on the success of schools and colleges in helping their pupils/students take qualifications that offer them the best opportunity to progress” and to “encourage institutions to make sure their students receive the support needed to prepare for and take up education, training or employment which offers good long term prospects” (DfE, 2015). The good practice guide (DfE, 2018) places these state-published destinations measures in context as accountability and transparency activities, as contrasted with destinations data that schools are also urged to collect internally and share with local partners Destinations data, as defined in this document, include pupils’ intended destinations before they have completed an education phase, in time for schools to have conversations with pupils and help them make informed choices that lead to better outcomes. Such conversations are intended to draw on the lagged destinations measures data, so that there are objective, albeit historical data on which to discuss alternative routes and the specific providers that pupils might choose between.

 The publication of provider-level destinations metrics has, as intended, spurred education sector stakeholders to take note and take action. For instance, The Careers & Enterprise Company, a Government-funded entity responsible for improving careers activities and employer engagement in English schools, has drawn on local area destinations metrics as part of calculating “cold spots”, which in turn have been used to prioritise the distribution of funds to local areas and projects (The Careers & Enterprise Company, 2016). Recently, The Careers & Enterprise Company (2018) has launched a consultation on updating this methodology and exploring destinations in greater detail, stating a desire to make better use of the richer school-level data that is now available.

Some schools in England, in particular large chains of schools, have also sought to make better use of these data, both for understanding their own performance and for supporting their pupils make destinations decisions. For instance, the Ark Academy Network is used as a case study by the Department for Education (DfE, 2018). Intended destinations are captured in standardised format, generating reports and dashboards automatically for individual schools and classes to access. For all students, regardless of whether they are choosing to go down the academic or technical pathway, data are shared on the quality of the education or training provider and the appropriateness of the pathway based on academic performance of the pupil in question and their general chances of passing the course. Insights on destination metrics are combined with other data points to help careers advisers and students understand the quality of alternative local destinations and pathways; they are also used by the leadership team in understanding whether there are particular groups of students, pathway routes or individuals that might need additional support to achieve good destination outcomes.

**Discussion**

The same general critiques of management by metrics and tertiary education destination metrics apply, in general terms, to the new secondary education destination metrics, including concerns over the short-term focus, the reductive emphasis on employment status, reliance on historic trends and lags in data availability, the limited ability to adjust for prior individual circumstances or labour market context and so on. As schools are typically smaller providers than universities, metrics are also likely to be more volatile from year to year, making them harder to interpret, although this can be mitigated by averaging metrics over multiple years.

It is important to highlight that policymakers and statisticians are often aware of many of these limitations and explicitly identify them. In other words, while the statistics are reductive and risk over-weighting certain partial and simplistic factors in decision-making, this is not a result of ignorance or malignance on the part of policymakers, who appear more generally driven by a commitment towards transparency and informed decisions at all levels of the system. For instance, the Department for Education in England discusses the definition of an “appropriate destination” as follows: “An appropriate destination will be different for every student and is determined by a range of factors, for example: attainment (or predicted attainment) and aptitudes; subject choices; hobbies and interests; career aspirations; skills and talents; and the labour market. This complexity means there will be several appropriate options for each student. […] It is therefore important that the student has considered the range of options available to them, and has a clear rationale for the choices that takes into account these factors. An inappropriate destination could be one that matches poorly with a student’s interests, attainment and aptitudes. Good career guidance can therefore support young people in making informed decisions and choosing an appropriate destination.” (DfE, 2018: 9-10).

There are three additional biases or limitations to highlight in this article that are not as commonly discussed and might risk being absorbed implicitly by consumers of these statistics. Firstly, a bias towards continuing education as opposed to joining the labour market. Secondly, a bias towards stable or standard career paths against individuals taking exploratory, protean approaches to their careers, investigating careers where project-working and portfolio-working is more common, or aspiring to entrepreneurial routes (Huddleston & Ashton, 2019). Thirdly, a bias towards what could be called “providerism”, the over-weighting of an implicit assumption that choosing the education provider will deliver its historical average results in individual cases. We suggest that enhanced careers counselling, supported in the future by better data, can mitigate such biases into a force for good.

*Bias towards continuing education*

Destination metrics more commonly cover progression from secondary to tertiary education than employment outcomes (e.g. New Zealand, Estonia) or have far more detail on transitions within education than work (e.g. England). This likely reflects greater data availability throughout the structured, state-subsidised education system, rather than any malicious intent, but may nonetheless reinforce assumptions that continued education is a default and attractive route. In England, such a focus reinforces concerns that schools that offer both pre-16 and post-16 education tend to prioritise their own post-16 provision over other routes that may better suit the pupil (The Careers & Enterprise Company, 2017) and concerns that stereotypes among teachers about apprenticeships or vocational education bias against those routes (Kashefpakdel & Rehill, 2018). The risk is that we look where the light is brightest, where the statistics are at their sharpest, rather than where the uncertainty is greatest or the potential to shape pathway decisions and outcomes at its most powerful.

 A more subtle bias in favour of continued education can be found in the focus on youth NEET rates. The labour market is highly likely to be a higher risk option that continued education, despite the drop-out rates in the education systems. Especially where individuals enter the labour market hoping to find work, rather than having already identified it, it is likely that students are more likely to spend at least some time NEET. In the English system, any period of time NEET in the two terms following graduation is sufficient to count as a failure with respect to this key accountability statistic. With such a blunt measure, schools could be understood for sticking with the safe and the familiar and encouraging students to pursue continued education wherever possible. In many respects, rather than metrics that focus on drop-outs (and hence criticise risk-taking), we need a society and system that supports informed and supported risk taking, one that makes it easier to engage in different pathways if the first route does not work out.

 In some extreme cases, there may be a tension between data on “course completions” and data on “employment outcomes”. In sectors of scarcity, for instance, the authors are personally familiar with situations where young people are tempted into employment by attractive terms and conditions prior to completing their courses, in sectors such as plumbing, plastering, and data science. This may not be an optimal outcome in some circumstances, but would be ideally captured as statistically distinct from other drop-out reasons that may reflect more adverse employment outcomes and less agency on the part of the student.

*Bias against project-based or protean careers*

The second, closely related bias is against a particular type of participation in the labour market – those areas categorised by uncertainty, project-based working and periods of unemployment between roles. This covers freelance routes, self-employment, entrepreneurship, and the gig economy, and is particularly prevalent in some sectors, notably the creative industries (Huddleston & Ashton, 2019; Ashton & Ashton, 2015; Baumberg & Meager, 2015), Metrics that inveigh against any period of unemployment or economic inactivity (like NEET-status) as a failure naturally impugn such roles and areas of work. There is a risk that the broader career management philosophy of “protean careers” is similarly underweighted, seeing modern careers as more commonly driven by the individual rather than their employer, repeatedly reinvented and hence more naturally encompassing changes and breaks in employment (Hall, 1996; Baruch 2014).

 These are exactly some of the changes in the labour market – growth of the gig economy and reduced consistency of relationship between employer and employee – that are driving policymakers to develop these transition metrics; it is sad if ironic that their metrics fail to capture the trends that motivate them. For instance, within the UK ‘self-employment accounts for nearly half of all jobs created since the economic downturn of 2008....it may not be long before freelancers, sole-traders and micro-entrepreneurs outnumber the public sector workforce’ (RSA, 2017).

This discussion is not meant to uncritically support the kinds of job choices or career pathways that have greater uncertainty. By contrast, it is important that students have access to information about the reality of such careers and that career counsellors are available to help them through it. Such disadvantages, where properly understood, may well lead to fewer students exploring such pathways. However, what we are critical of is the disguising of such disadvantages in aggregate metrics, displayed on normative univariate scales that purport to be fair and objective measures of success. As with the bias to continuing education, these relatively subtle emphases in metrics reinforce concerns over the suitability of provision in schools more generally to prepare young people for the possibility of freelance careers and self-employment (Huddleston & Ashton, 2019).

*Bias of “providerism” overplaying the power of choice*

One key policy motivation for developing destination metrics is that it can help young people make better choices about their education pathways, specifically the provider at which they might want to study a particular course. For instance, in the English context, if students need to re-take certain qualifications in English and Maths post-16, they might prefer to go to a post-16 provider that achieves good student progress (relative to starting point) and good pass rates in such re-takes. Alternatively, students with higher education aspirations might want to go to a 16-18 provider with a high historical progression rate to Level 3+ or a high success rate in accessing the most prestigious universities. The risk is that such metrics can lead to an over-confidence that choosing the provider will deliver the outcome implied by the metric.

 Previous analyses have highlighted findings that student outcomes are driven significantly by that student’s circumstances and prior attainment, as well as broader labour market conditions, rather than the value-added of a particular institution. Indeed, analysis of the Longitudinal Study of Young People in England (LYSPE2) suggested that 84% of variation in exam results at age 16 was driven by pupil-level differences, with only 16% driven by school-level differences (Lessof, Ross, Brind, Harding, Bell, & George, 2018); other analysis has found that students’ prior attainment over multiple examination phases is sufficient to explain the vast majority of the variation in future attainment (Gorard & Siddiqui, 2019). Similarly LEO analysis has suggested that, outside of a handful of providers, the choice of university makes little difference to wage outcomes, once student context, prior attainment and choice of subject are controlled for (Willetts, 2019). In other words, while the average destination outcomes may vary materially from provider to provider, this may reflect more the nature of their cohort than the activities in that institution.

 Returning to the example of a provider with an historically high pass-rate in English re-takes, this may reflect more the type of students they accept or the types of other courses and activities done by such students, rather than the quality of the English teaching department, as implied in attempts to use the metric to help a student needing to re-take English decide where to go. If the student in question is very different from the type of students that make up the majority of that school’s historical cohorts or is doing a different combination of activities, the metric may have little bearing on his or her chance of success.

This bias does not mean such metrics are meaningless for the stated purpose: someone joining a provider who would, a priori, face worse outcomes than that provider achieved on average historically may still see some uplift (e.g. from peer effects, teacher ambition, quality of the institution), but far less than they might be given to hope for from the usage of such data. It is also important to highlight that even if provider contributions are modest in absolute terms, they may still represent significant changes at the margins or contribute to tipping points for certain individuals (e.g. achieving a near-pass rather than a near-fail). In other words, provider-level destinations data may still be useful to individuals, but it needs to be contextualised and caveated as a cohort-average statistic and should only be a contribution to individual decision-making along with other factors – our concern here is with a bias in the application of the data and in over-weighting it, rather than to reject its utility entirely.

A further assumption in the provision of such metrics to support choice is that students are able to look across a set of upper secondary education providers and choose which one to go to. In practice, this choice can be constrained – state-funded providers may require students to go to the nearest one with a vacancy, some schools may have entrance criteria, or it may be logistically impractical for students to go to the ideal school (although we note that well-resourced families can often subvert such constraints given enough time, such as by buying or renting accommodation near the schools they wish to access).

*What can be done: Enhance the data and mediate its usage*

One possible response to these limitations and concerns might be to argue for the restriction of such data. However, the absence of data does not lead to an absence of judgement; instead, it is judgement based on anecdote, word of mouth and stereotype. Data may well lead to imperfect judgements, but this is better mitigated than dismissed. Furthermore, education providers may feel they have too little influence over destination metrics to be held accountable for them, but the mature answer to this would be to recognise and contextualise such factors, rather than to hide from the data (indeed, any societal outcome of note is too complex for any one institution to be considered solely responsible for it). More normatively, attempts to restrict access to data based on its complexity feel paternalistic and inappropriate. Instead, we see potential for using the data better, gathering more of it and proactively mitigating its limitations, in particularly via high-quality, empowered career counselling.

In one sense, destination metrics are a laudable endeavour in that they diversify away from a focus just on academic attainment. Such a broader focus will be welcome to those funders and students of the education system who are interested in what happens next as well as in their qualifications. It may also help respond to a growing critique, albeit a controversial and contested one, of qualifications beyond basic education and technical skills, with the extreme case against higher education put forward by Caplan (2018).

 Using LMI and pathways data, which could extend to provider-level destination metrics, has been identified as good practice in career guidance (Hooley, Hutchinson, & Watts, 2010; Cedefop, 2016), with benefits identified particularly for disadvantaged young people and for non-traditional career paths. For instance, the Asian Development Bank describes a case study in China in which information booklets on college costs and financial opportunities had significant effects on the likelihood that poor students applied for and received financial aid, ultimately improving matriculation into college (ADB, 2015). Other case studies highlighted the importance of information on how the costs and benefits of education play out in specific instances, reflecting for instance the distance moved from social origin to destination in more historically realistic ways. For instance in China, when data that over-estimated the returns of secondary education relative to wage labour were corrected, fewer children from poor migrant worker families chose to pursue secondary education (Loyalka et al, 2013). In England, research for the Equality and Human Rights Commission has identified that young people have limited information on the pay advantages of non-traditional routes and that the career guidance needs of disadvantaged young people and equality groups are not well understood (Hutchinson, Rolfe, Moore, Bysshe, & Bentley, 2011).

However, using data as part of career guidance for young people is difficult. Focus group research by the Behavioural Insights Team found that data are dispersed, difficult to evaluate and difficult to contextualise; while young people believe they have access to the information they want, they often demonstrate a lack of knowledge and research about their options or preferred career, operating according to a “running hypothesis” rather than informed choice (BIT, 2016). A report for the English Department for Education highlighted much potential to use data better, with secondary school careers education tending to draw on data in an ad hoc and unstructured fashion, using data that generally lacked significance in learners’ decision making, being too hard to access, contextualise and personalise (CooperGibson Research, 2017). Testimony evidence from young people in a range of countries supports the potential for improvement in career guidance provision. For instance, analysis in Australia suggested that around a third of school leavers who did not go onto further study described their careers education and guidance as not useful (Polesel, Helme, Davies, Teese, Nicholas, & Vickers, 2004); in England, young people have similarly mixed perspectives with over 50% disagreeing that their careers advice has been helpful despite 60%-70% saying that school is the most important place for such advice (YouGov, 2010) and stakeholders have also tended to be critical (Long & Hubble, 2019). Ultimately, for career counselling to fulfil its potential, it needs to be given the time, the resource and the tools necessary to do so – with career guidance and employer engagement accounting for at best 1-2% of time in English secondary education, we have some way to travel (The Careers & Enterprise Company, 2018b). Nonetheless, destination metrics have the potential to be part of a package of activities that empower career counsellors to deliver higher quality support – both by providing data to support decision-making and by requiring expert support to find, personalise and contextualise the data, cognisant of limitations such as those highlighted in this article.

This review of secondary education destination metrics suggests some areas where data could potentially be improved and career counsellors be empowered to mediate it in their interactions with young people. Data could be richer, covering insights on length of time NEET and reasons for NEET, rather than a binary NEET/sustained-EET status. Data could be better contextualised, adjusting salaries for part-time roles, for choices of sector and cost of living. Data could show longer pathways into the future and describe how probabilities change contingent on future decisions and interim outcomes, including future entry points into education and lifelong learning. Insights from adults further into their career about their perception of job value and quality, and how their careers have been supported would also provide useful balance and context to data points based on average salaries. From a provider accountability perspective, data can be normalised, with youth NEET considered relative to adult employment levels and with education progression data considered relative to prior attainment. Data needs to be delivered to individuals in simpler, more personalised ways – only showing students the courses they might be interested in at institutions they could realistically choose to go to, with metrics personalised as far as possible using historica data on student cohorts with similar features to the individual in question. Metrics-based data can also be enriched with transparency initiatives – similar to how existing employees anonymously describe their work and review their employers on glassdoor.co.uk – and greater use of school time to help young people access and engage with different people from the world of work, to form their own views and hypotheses on possible futures. The specious confidence that misused data can provide, being amenable to summarising and ranking to identify the “best route” for young people and all the false hope that entails, also needs to be guarded against – circumstances can change and being ready to change with them when required is part of surviving in the labour market.

The resource challenge in improving data and how it is accessed might be met in part by some of the same new technologies that worry policy makers about the future of the labour market. For instance, some insights from existing surveys – with their lagged and partial datasets – might be replaced by website scraping to understand labour market trends in real time (e.g. [www.burning-glass.com](http://www.burning-glass.com)) or by crowd-sourced insights on jobs, education providers or career pathways. Administrative dataset linkages, such as LEO described above, may replace many of the hard metrics around employment outcomes that have previously been a priority for resource-intensive surveys, which might enable money to be reinvested into deeper, qualitative work to contextualise the metrics. Artificial-intelligence powered tools may help young people navigate complex choices, as a time-saving complement for some aspects of career counselling delivered by a professional.

Not all of these suggestions on data provision and access is possible in the short-term, but it sets a direction of travel and highlights the gaps in current data-based understanding that career counsellors might bear in mind in their conversations with young people. Skills of communication and empathy are needed to do this while still drawing on these new powerful sources of at-scale information to support decision-making, where previously stereotype, personal experience and intuition might have dominated.

**Conclusion**

This paper has identified a small but growing number of countries that are developing metrics to describe the destination outcomes of graduates from secondary education at a provider level, with examples identified in New Zealand, Australia, England and Estonia, as well as a direction of travel towards greater data availability across the EU and in Canada. Such metrics help to balance out a focus on the qualification-based outcome measures of education destinations but remain simplistic in scope, suffering from biases that tend to privilege continued education, prioritise traditional and more stable career paths, and emphasise a provider-centric view of individual decision-making. As such the complexities of transitions, including self-employment, gig-work and career shifts, and the changing patterns of demand in the economy risk being under-examined and under-discussed.

We have critically explored ~~describe~~ the ways that such metrics might be improved in the future and highlight the importance of the career counsellor in supporting students to engage with and incorporate such metrics into their decision making. Education providers’ vision of student destinations tend not to look too far beyond their graduation and such metrics describe an “end of the road” that does not match up with student life journeys, whether as intended at the time or in hindsight given the serendipitous and circuitous routes that careers often take. The value of a career counsellor should be someone who can stand near the signposts at end of the “institutional road” and help young people choose a sensible path outwards, mindful of all the road left to travel beyond the institution’s horizon and helping students prepare for all the junctions and dead ends, complexity, uncertainty and fragility that may constitute their future careers.

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