

## Submissions Abstract Book - All Papers (Included Submissions)

0467

Understanding inequality in higher education by applying the data linkage method to measure disadvantage

Mi Young Ahn<sup>1</sup>

<sup>1</sup>*University of Kent, Kent, United Kingdom*

**Research Domain:** Student experiences (SE)

**Abstract:** Despite the consensus of the impact of students' disadvantaged backgrounds on their academic and social engagement, belonging and success in higher education (HE), there is a lack of evidence-based research focusing on the measurement of disadvantage. This study aims to achieve a comprehensive understanding of inequality in HE by applying the data linkage method and examining how it affects students' academic performance. Two domains, namely educational disadvantage from the secondary school characteristics, and postcode-based socio-economic status, are operationalised to measure inequality, alongside widely used demographic indicators. A new database for the complete cohort of students who are enrolled at a mid-ranked UK institution with a diverse student population will be generated, and statistically examined on the complicated social and educational contexts. This study will enrich understandings of the gaps in access, continuation and attainment to HE.

**Paper:** Understanding inequality in higher education by applying the data linkage method to measure disadvantage

Several studies argue that students from disadvantaged backgrounds tend to display lower academic engagement and belonging, which in turn affects their retention and success in higher education (HE) (e.g. Ahn and Davis 2020a; Keane 2011; Mallman 2017; Lynch and O'Riordan 1998; O'Donnell and Tobbell 2007; Patiniotis and Holdsworth 2005; Platt 2007; Reay 2002). Students from lower socio-economic status, who are often referred as 'non-traditional', are not only under-represented in terms of participation in HE in general, but also disproportionately represented in the Russell group institutions (Donnelly, 2015; Thiele et al. 2017). There is a lack of empirical studies investigating *measurement* of disadvantage, particularly, which factors are of importance, their impact and association (Ahn and Davis 2020b). Although the Office for Students publishes access and participation data resources as practical guides, it provides a limited range of information. Measuring disadvantage in HE is complex, both conceptually and empirically (Ahn and Davis 2020b); multiple dimensions in the individual, educational, and socio-economic contexts should be considered. However, there have been few studies linking the statistical datasets concerning demographic, educational, and socio-economic disadvantage as improved methodological approaches are required.

This study will merge multiple datasets on students' backgrounds on the grounds of three dimensions: individual demographic information, educational disadvantage arising from secondary school characteristics, as well as postcode-based socio-economic status. Individual demographic

indicators including age, gender, ethnicity, nationality for fee status, religion, and disability will be combined with two additional domains and operationalised to provide a comprehensive measurement of inequality (Oxford University, 2020). Secondly, the educational aspect, which relates to the average performance of students' secondary schools such as Ofsted outcomes, Free School Meals eligibility, and academic outcomes (i.e. GCSE and A-level results), will allow us to understand the school effect (Donnelly, 2015). Average academic performances and outcomes of students' secondary schools tend to impact progress to and choice of universities (Donnelly, 2015; Donnelly and Evans, 2016). Lastly, socio-economic status will be explored by applying postcode-based indicators. Recent studies reveal that some indicators are less effective to capture students' socio-economic status than others, and most Russell group universities tend to develop their own filtering system to support widening participating students (Boliver, Gorard and Siddiqui, 2019; McCabe, 2020). Therefore, we will apply several measures, namely, ACORN (categorisation of the UK population by level of socio-economic advantage), POLAR4 (participation rates entering higher education) and IDACI ([Income Deprivation Affecting Children Index](#)).

This study aims to achieve a comprehensive understanding of inequality observed in HE by applying the data linkage method and examining how it affects students' academic performance. We will apply the deterministic (exact) matching method to identify, match and merge different official datasets about students' background. By doing so, this study will help to answer critical questions such as 'how are various dimensions of students' background associated and how do these affect attainment?', 'which factors of students' background are the most influential in determining disadvantage?' and 'are there any significant differences in attainment between traditional and non-traditional students?'

A new database for the complete cohort of students who are enrolled at a mid-ranked UK institution with a diverse student population will be generated. We can statistically examine the complicated social and educational contexts, discussed above, to enrich understandings of the gaps in access, continuation and attainment to HE. The database will consist of demographic, educational, and socio-economic domains of those students' backgrounds from two campuses displaying differing student profiles. The comparative aspect of these datasets will be a significant addition to previous studies (e.g. Hope and Quinlan, 2020) as this database will enable us to examine contrasts in students' backgrounds between the campuses.

This study will make a valuable contribution to the existing literature on HE by providing a new database linking the crucial elements of disadvantage and investigating their relationship and impact on students' academic performance. Furthermore, findings will be beneficial to the university in the discussion, as well as HE institutions in general, by providing evidence-based understandings of disadvantaged students. It will bring a more concrete empirical and methodological basis for future studies on educational inequality and by doing so, help to advance current debates on students' belonging, success, and retention in HE.

**References:** Ahn, M. Y., & Davis, H. H. (2020a). Four domains of students' sense of belonging to university. *Studies in Higher Education*, 45(3), 622-634.

- Ahn, M. Y., & Davis, H. H. (2020b). Students' sense of belonging and their socio-economic status in higher education: a quantitative approach. *Teaching in Higher Education*, 1-14.
- Boliver, V., Gorard, S. and Siddiqui, N. (2019). Using contextual data to widen access to higher education. *Perspectives: Policy and Practice in Higher Education*, 25(1), pp.7-13
- Donnelly, M. (2015). A new approach to researching school effects on higher education participation. *British Journal of Sociology of Education*, 36(7), 1073-1090.
- Donnelly, M., & Evans, C. (2016). Framing the geographies of higher education participation: Schools, place and national identity. *British Educational Research Journal*, 42(1), 74-92.
- Hope, J., & Quinlan, K. M. (2020). Staying local: how mature, working-class students on a satellite campus leverage community cultural wealth. *Studies in Higher Education*, 1-14.
- Keane, E. (2011). Distancing to self-protect: The perpetuation of inequality in higher education through socio-relational dis/engagement. *British Journal of Sociology of Education*, 32(3), 449-466.
- Lynch, K., & O'riordan, C. (1998). Inequality in higher education: A study of class barriers. *British Journal of Sociology of education*, 19(4), 445-478.
- McCabe, J. (2020) *Widening participation post-16: who participates? A case study of the Aim for Oxford programme* [Master's thesis]. University of Oxford.
- Mallman, M. (2017). The perceived inherent vice of working-class university students. *The Sociological Review*, 65(2), 235-250.
- O'Donnell, V. L., & Tobbell, J. (2007). The transition of adult students to higher education: Legitimate peripheral participation in a community of practice? *Adult Education Quarterly*, 57(4), 312-328.
- Oxford University (2020) Disadvantage, University of Oxford Undergraduate Admissions Statistics - Notes and definitions, <https://www.ox.ac.uk/about/facts-and-figures/admissions-statistics/undergraduate-students/current/disadvantage> (accessed on 10/2/2021)
- Patiniotis, J., & Holdsworth, C. (2005). 'Seize that chance!' Leaving home and transitions to higher education. *Journal of Youth Studies*, 8(1), 81-95.
- Platt, L. (2007). Making education count: the effects of ethnicity and qualifications on intergenerational social class mobility. *The Sociological Review*, 55(3), 485-508.
- Reay, D. (2002). Class, authenticity and the transition to higher education for mature students. *The Sociological Review*, 50(3), 398-418
- Shlomo N. (2019) Overview of Data Linkage Methods for Policy Design and Evaluation. In: Crato N., Paruolo P. (eds) *Data-Driven Policy Impact Evaluation*. Springer, Cham.
- Thiele, T., Pope, D., Singleton, A., Snape, D., & Stanistreet, D. (2017). Experience of disadvantage: The influence of identity on engagement in working class students' educational trajectories to an elite

university. *British Educational Research Journal*, 43(1), 49-67.