

Institution: University of Edinburgh		
Unit of Assessment: Education (23)		
Title of case study: Inequalities and school curriculum: informing policy on widening access to higher education and promoting social mobility		
Period when the underpinning research was undertaken: 2005 – 2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Professor Cristina Iannelli	Personal Chair of Education and Social Stratification	1999 – present
Professor Lindsay Paterson	Professor of Education Policy	1998 – present
Dr Adriana Duta	Lecturer in Quantitative Methods	2015 – present
Period when the claimed impact occurred: 1 January 2015 – 31 December 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact <p>“Tackling inequalities in Scottish society” is one of the key National Outcomes of the Scottish Government. Research led by Iannelli at the University of Edinburgh provided new knowledge on the role of the school curriculum in widening access to higher education and promoting social mobility. This research has raised policymakers’ and the public’s awareness of the role of school curriculum choices in contributing to social inequalities in higher education and labour market outcomes in England and Scotland, which has:</p> <ol style="list-style-type: none"> 1. directly informed the work of the Commission on Widening Access (COWA), influencing their recommendation on Access to Key Subjects; and 2. shaped the Scottish Government’s strategy to address the issue of subject choice in Scottish secondary schools. 		
2. Underpinning research <p>Over GBP1,300,000 in funding from the ESRC and the Scottish Funding Council underpinned eight studies conducted by Iannelli, Paterson and Duta as part of the Applied Quantitative Methods Network (AQMeN) research centre with colleagues from international institutions. Findings showed that institutional factors – including school curriculum (3.1, 3.2, 3.3); differentiation of higher education (HE) institutions (3.3, 3.4); and the degree of linkages between education and the labour market (3.5, 3.6) – play key roles in the educational and labour market outcomes of those from lower socio-economic backgrounds.</p> <p>These new studies have introduced novel understandings of the mechanisms of social reproduction of inequalities in education and the labour market. The research on the role of specific subject choice, in particular, is novel; it goes beyond the vocational/academic divide often discussed in international and national research. The research also contributes to the wider debate about standardisation and differentiation of national education systems, and how they relate to social inequalities in education and labour market outcomes. Its main methodological strengths lie in using high-quality, large-scale survey and administrative data; applying advanced quantitative methods; and combining life-course perspectives, time period analyses and cross-country comparative studies. The quality and impact of the</p>		

research – in particular 3.4 – was recognised in 2015 by the British Educational Research Association as one of 40 landmark studies that have had a significant impact on educational policy, practice, research methodology and/or theory over the past 40 years.

Through its cross-country comparative research, AQMeN has highlighted that education systems that allow flexibility in curriculum choices, such as the Scottish system, offer another avenue for social inequalities to emerge. This occurs since more socially advantaged parents have more information and resources for ensuring that their children make the best decisions leading to higher educational attainment and better jobs. This is especially true when HE institutions put a strong emphasis on subjects as a way for differentiating and selecting applicants. Pupils from less advantaged social classes study fewer subjects than pupils from higher social classes. This difference is mainly due to the lower uptake of English, Languages, Mathematics, Sciences, Geography and History by less advantaged young people. These subjects are those deemed to 'facilitate' entry into universities, especially research-intensive universities. Social inequalities in subject choices in secondary education, in turn, have consequences for later decisions on HE entry and labour market outcomes.

Thus, in a study on occupational outcomes at three points of individuals' lives (at ages 23, 33 and 42) in the UK (3.1), Iannelli found that the higher representation of those from more advantaged social backgrounds in professional or managerial jobs, was partially explained by the fact that they had studied a higher number of languages, English, mathematics and science subjects at school. For example, when analysing occupational outcomes at age 33, Iannelli found that between 23% and 29% of the social advantage associated with having a parent from the top social classes or a highly-educated parent could be attributed to school curriculum choices.

Moreover, responding to the feedback received from school practitioners during one of the AQMeN knowledge exchange events, the AQMeN research team analysed the role of subject choices for the labour market outcomes of young people who do not enter HE after leaving school (3.6). The findings did not support teachers' beliefs that having studied vocational subjects at school may help young people from disadvantaged social backgrounds to achieve better labour market outcomes. Indeed, the study found the existing social inequalities in school-to-work transitions in Scotland could be only partly explained by curriculum choices. With a few exceptions, subjects studied at secondary school mattered less for school leavers' job opportunities than for their HE opportunities.

The conclusions from these studies are that the general nature of school curricula and the lack of standardisation of certifications in Scotland are unable to provide clear signals about school leavers' knowledge and skills to future employers (3.5, 3.6). However, having studied academic subjects is very important for enhancing young people's chances of attending HE, especially at more prestigious institutions (3.2, 3.3). The findings of the research above have important implications for widening HE access and for promoting social mobility.

3. References to the research

- 3.1 Iannelli, C. (2013) The Role of School Curriculum in Social Mobility, *British Journal of Sociology of Education*, 34(5-6): 907-28. <https://doi.org/10.1080/01425692.2013.816031>
- 3.2 Iannelli, C., Smyth, E. and Klein, M. (2016) Curriculum Differentiation and Social Inequality in Higher Education Entry in Scotland and Ireland, *British Educational Research Journal*. 42(4): 561-581. <https://doi.org/10.1002/berj.3217>
- 3.3 Duta, A., An, B. and Iannelli, C. (2017) Social Origins, Academic Strength of School Curriculum and Access to Selective Higher Education Institutions: Evidence from Scotland and the USA, *Higher Education*. <http://doi.org/10.1007/s10734-017-0166-5>

- 3.4 Iannelli, C., Gamoran, A. and Paterson, L. (2011) Scottish Higher Education, 1987–2001: Expansion through Diversion, *Oxford Review of Education*, 37(6): 717-741. <https://doi.org/10.1080/03054985.2011.636227>
- 3.5 Jacob, M., Klein, M. and Iannelli, C. (2015) The Impact of Social Origin on Graduates' Early Occupational Destinations – An Anglo-German Comparison, *European Sociological Review*, 31(4): 460-476. <https://doi.org/10.1093/esr/jcv006>
- 3.6 Iannelli, C. and Duta, A. (2018) Inequalities in School Leavers' Labour Market Outcomes: Do School Subject Choices Matter?, *Oxford Review of Education*, 44(1): 56-74. <http://doi.org/10.1080/03054985.2018.1409970>

4. Details of the impact

This pioneering body of research has a) raised awareness of the role of curriculum choices in contributing to social inequalities and b) directly informed the Scottish Government's strategy for achieving its goal of reducing inequalities in university access, an aim set forth in the 2014-15 Programme for Government.

1. Raised awareness of the role of curriculum choices in contributing to social inequalities in HE and labour market outcomes in England and Scotland

As a pathway to this impact, the research has been disseminated widely to over 380 key Scottish policymakers, practitioners and academics at 6 knowledge exchange events and various meetings with Scottish Government representatives from 2015-2017. These events have been accompanied by widely accessible AQMeN research briefings and YouTube videos [5.1A, 5.1B]. Furthermore, to raise awareness of the role of curriculum choices, the research has been shared at high-profile events including: the "The Future of Education Data in Scotland" jointly-organised with Scottish Government [5.2A]; the European Forum for Freedom in Education 2015 symposium [5.2B]; and the ESRC Festival of Social Science 2015 event "Social Inequalities in Education: Why and How National Institutional Factors Matter" [5.2C]. Media reports in both the mainstream and professional press followed from these events to raise the public's awareness about the research, such as appearances in news outlets including the *Times Education Supplement Scotland* [5.3A], the *Herald Scotland* [5.3B], BBC Radio Scotland [5.3C] and other national news media [5.3D, 5.3E, 5.3F].

Prominent education figures across the UK have referenced Iannelli's research when formulating policy positions linked to recent curriculum reforms. For example, the research was cited in a speech by UK Education Secretary Michael Gove at the 2015 Policy Exchange Education Conference stating: "*The work of Dr Cristina Iannelli at Edinburgh University demonstrates that the type of curriculum you study – specifically enjoyment of core academic subjects – is more important than the type of school you attend, whether grammar, independent or comprehensive, in determining future success*" [5.4]. Furthermore, the work was cited by HM Chief Inspector Amanda Spielman at the 2017 Ark's Teach conference: "*Research by Dr Cristina Iannelli at the University of Edinburgh has shown that differences in the secondary school curriculum have a much larger impact on social inequality than differences in school type. And so if we are ever to improve social mobility, between and within generations, we should start with sorting the curriculum*" [5.5].

The research is also being used to raise awareness among the wider public and ultimately to impact pupils' decisions about subject choice. A theatre piece "Schooled" was informed by Iannelli's research on curriculum and provided further insights on the underlying issues that are grounded in the lived experiences of pupils and teachers. Two performances of this work-in-progress piece took place on 23-24 November 2018 at the Traverse Theatre [5.6A]. Afterwards, the 170 spectators including students, parents and teachers were invited to express their views about the main messages from the play. The play writer and actress,

Pauline Lockhart, said: *“This stimulated much debate and participation from the audience and led to Edinburgh College introducing a new student questionnaire to gain information on how students want to access their education and changes they would like to see”* [5.6B]. A full production of the theatre piece has been commissioned by the Traverse theatre. The script development was delayed due to COVID-19 but it is in progress. The new theatre performances are expected to further widen the reach of the research, ultimately impacting positively on the education experiences of socially disadvantaged pupils.

2. Informed the Scottish Government’s strategic aim of reducing inequality in university access

The research has had a direct impact on the Scottish policymakers’ understanding and knowledge of the role of curriculum choice and inequality. For example, following the 2015 ESRC Festival of Social Science event attended by several members of the Commission on Widening Access (COWA) as speakers and panellists, the Scottish Government’s Head of Education Analysis, Intelligence and Performance said, *“We’re interested in ensuring that every child in Scotland fulfils their potential, so the research that we’re hearing about today [referring to the AQMeN research] will help us greatly in thinking about how we deal with the needs of children from different backgrounds, how we ensure that they get the chance to maximise their potential to enable them to attend higher education if that’s what they wish to do”* [5.7].

Subsequently, the COWA used insights from the research findings to inform their work in advising Ministers on steps necessary to ensure that every child has an equal chance of accessing higher education. Iannelli and colleagues submitted written evidence to COWA in 2015 and have subsequently given oral evidence to and attended private meetings with COWA members to discuss their research findings. The evidence provided resulted in the Commission including “secondary school subject choices” among the barriers to access in the COWA interim report [5.8A], which then led to their inclusion of Access to Key Subjects (Recommendation 18) as one of 34 key recommendations in their final report [5.8B]: *“Universities, colleges and local authorities should work together to provide access to a range of Higher and Advanced Higher subjects, which ensures that those from less advantaged backgrounds or living in rural areas are not restricted in their ability to access higher education by the subject choices available to them”*. The Scottish Government has taken forward this recommendation by rolling out new packages of careers advice and student support in order to *“continue to make progress on equal access to university by 2030”* (2018-19 Programme for Government, p. 4). The research was also cited in the 2017 Annual Report of the Commissioner for Fair Access in Scotland [5.9].

A testimony of the influence of this work is Iannelli becoming a key member in 2018 of the Scottish Government’s Academic Reference Group, which is informing the research strategy for Scottish Education. Scottish Government staff have cited the work of Iannelli and the AQMeN centre in raising awareness about the importance of quantitative research skills and methodology as being *“a really influential and positive”* aspect of strengthening the work of the Scottish Government and other quantitative researchers across Scotland [5.10]. Describing Iannelli’s contributions, a Scottish Government Principal Research Officer within the Scottish Government Education Analytical Services’ Learning Analysis Unit stated: *“Her research helped inform the decision to undertake research around curriculum choices in Senior Phase. That research underpinned the decision we took to prioritise that area, and it also informed the approach we decided to take with the Headteacher survey across Scotland”* [5.10]. The Unit invited Iannelli to join an advisory group overseeing this commissioned research which will continue to inform Scottish Government educational policies. Furthermore, the research was submitted to the OECD’s review of the Scottish Curriculum for Excellence, with further impact on policy expected in the future.

5. Sources to corroborate the impact**5.1 AQMeN research briefings and online media**

- A) AQMeN research briefings (in particular see Briefing No.7 (2015): "Subject Choice and Inequalities in Access to Higher Education: Comparing Scotland and Ireland"): <http://www.research.aqmen.ac.uk/education-and-social-stratification-overview/education-and-social-stratification-publications-and-outputs-2/>
- B) AQMeN YouTube channel: https://www.youtube.com/channel/UCSQI_V2MrcCZa-JXfIYq-ew/playlists

5.2 Resources from high-profile knowledge exchange events

- A) Video from a jointly-organised event with the Scottish Government, "The Future of Education Data in Scotland": <https://www.youtube.com/watch?v=Lsmlur8sbbA>
- B) The European Forum for Freedom in Education (EFFE) 2015 symposium and report: <https://www.effe-eu.org/deutsch/aktivit%C3%A4ten/improving-social-equity/>
- C) Summary Report from the ESRC Festival of Social Science 2015 event, "Social Inequalities in Education: Why and How National Institutional Factors Matter": <http://www.research.aqmen.ac.uk/education-and-social-stratification-overview/education-and-social-stratification-publications-and-outputs-2/summary-report-social-inequalities-in-education-why-and-how-national-institutional-factors-matter/>

5.3 Examples of media reports raising awareness about the AQMeN research

- A) *Times Education Supplement Scotland* (weekly print readership approximately 349,000) article: <https://www.tes.com/news/school-news/breaking-news/scotland-subject-choice-vital-improving-childrens-life-chances/>
- B) *Herald Scotland* (print readership approximately 100,000; circulation 184,000) article: <https://www.heraldscotland.com/news/13934994.subject-choice-in-scottish-schools-discriminates-against-poorer-pupils/>
- C) BBC Radio Scotland interview: <http://129.215.55.201/node/2258>
- D) *The Conversation* article (readership figures not disclosed): <http://theconversation.com/family-background-more-important-for-a-good-graduate-job-in-the-uk-than-germany-34939>
- E) *SecEd* article (readership figures not disclosed) on accidental bias: <http://www.sec-ed.co.uk/news/accidental-bias-mars-he-equal-access-ambitions-in-scotland/>
- F) *SecEd* article (readership figures not disclosed) on the role of subject choice in closing the attainment gap: <http://www.sec-ed.co.uk/news/academic-flags-up-the-role-of-subject-choice-in-closing-the-attainment-gap/>

5.4 Education Secretary Michael Gove's speech at the 2014 Policy Exchange Education Conference: <https://www.gov.uk/government/speeches/the-purpose-of-our-school-reforms>**5.5 HM Chief Inspector Amanda Spielman's speech Ark's Teach 2017 conference:** <https://www.gov.uk/government/speeches/amanda-spielman-s-speech-at-arks-teach-2017-conference>**5.6 Evidence from Traverse Theatre**

- A) Traverse Theatre's 2018 programme listing *Schooled* (p. 17) https://issuu.com/traverse_theatre/docs/aut2018-final-web
- B) Testimonial from Pauline Lockhart, playwright and actress of *Schooled*

5.7 Interviews from the 2015 FoSS event, including the quote from the Scottish Government Head of Education Analysis, Intelligence and Performance at 1:49: <https://www.youtube.com/watch?v=0a1cwk1dvw0>**5.8 Commission on Widening Access (COWA) reports**

- A) Interim Report – see pages 9, 11 and 42: <https://www.gov.scot/Publications/2015/11/9302>
- B) Final Report (ISBN: 9781786520944): <https://beta.gov.scot/publications/blueprint-fairness-final-report-commission-widening-access/>

5.9 Commissioner for Fair Access Annual Report 2017 (ISBN: 9781788515122): <http://www.gov.scot/Resource/0052/00529104.pdf>**5.10 Testimonial from the Scottish Government Principal Research Officer, Learning Analysis Unit**