School Subject Choice and University Entrance

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Widening Access to Scottish Higher Education: Getting in and Getting on
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This presentation draws on research conducted in the AQMeN Education and Social Stratification research strand:


Explanations of social inequalities in education

- Social inequalities in educational attainment influenced by two factors (*Boudon, 1974*):
  - school performance differences
  - differences in educational choices

- Cross-country study on both factors (*Jackson 2013*)
  - Extent of social inequalities in school performance similar across countries
  - IEO larger in countries with strong social inequalities in educational choices

→ Choice-based systems produce larger social inequalities in educational attainment
Rationale for our research

• In the UK the role of school curriculum choices in reproducing social inequalities in HE entry has been overlooked

• Focus of international literature
  – Selection into different school tracks (early tracking), e.g. academic vs. vocational
  – Less attention paid to within-school curriculum differences

• Flexible choice of type and number of secondary school subjects in Scotland

• Eight subjects (English, languages, maths, history, physics, chemistry, biology and geography) ‘facilitate’ access to Russell Group universities (Russell Group Dossier, 2011)
Key research questions and data

**RQ1: Are there social class differences in subject choices in S3/S4 and S5/S6?**
Data: Scottish Longitudinal Study
- SLS members passed through the school stages S3-S6 or S4-S6 in 2007-2010
- Census data (2001) provide information on pupils’ family, housing and neighbourhood characteristics at age 9/10
- Education data include school census information, SQA attainment data (including subjects, levels and performance) and attendance data

**RQ2: To what extent do subject choices explain differences in social inequality in HE entry?**
RQ1: Key findings

- There is a clear social divide in the probability to take ‘facilitating subjects’ (science, languages, cultural subjects and English and Math in S5/S6) and ‘non-facilitating subjects’ (other: technical, business, vocational)

- Social inequalities in subject choices in S5/S6 are strongly explained by subject choices in S3/S4
### Uptake of subjects by parental social class

#### S3/S4

<table>
<thead>
<tr>
<th>Class of origin (%)</th>
<th>Science</th>
<th>Language</th>
<th>Cultural subj.</th>
<th>Other subj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine occupations</td>
<td>75</td>
<td>58</td>
<td>87</td>
<td>88</td>
</tr>
<tr>
<td>Intermediate occupations</td>
<td>90</td>
<td>81</td>
<td>96</td>
<td>89</td>
</tr>
<tr>
<td>Higher managerial and professional</td>
<td>97</td>
<td>88</td>
<td>98</td>
<td>76</td>
</tr>
</tbody>
</table>

#### S5/S6

<table>
<thead>
<tr>
<th>Class of origin (%)</th>
<th>English</th>
<th>Maths</th>
<th>Science</th>
<th>Language</th>
<th>Culture</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine occupations</td>
<td>48</td>
<td>40</td>
<td>31</td>
<td>7</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Intermediate occupations</td>
<td>76</td>
<td>64</td>
<td>49</td>
<td>16</td>
<td>66</td>
<td>64</td>
</tr>
<tr>
<td>Higher managerial and professional</td>
<td>87</td>
<td>74</td>
<td>66</td>
<td>20</td>
<td>74</td>
<td>57</td>
</tr>
</tbody>
</table>

*Source: Scottish Longitudinal Study (SLS), own calculations.*
Subject choice in S3/S4 and subject choice in S5/S6

Source: Scottish Longitudinal Study (SLS), own calculations.
• **RQ2: To what extent do subject choices explain differences in social inequality in HE entry?**

  – To answer this question we compared two countries with different structures in terms of standardisation of curriculum and HE admission practices

  – We exploit institutional differences between Ireland and Scotland to examine their impact on social inequality among HE entrants
# Comparing Scotland and Ireland

<table>
<thead>
<tr>
<th>Scotland</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both systems with comprehensive and compulsory schooling until the age of 16</td>
<td></td>
</tr>
<tr>
<td><strong>Upper secondary curriculum</strong></td>
<td></td>
</tr>
<tr>
<td>No compulsory subjects</td>
<td>Irish, English and Maths compulsory</td>
</tr>
<tr>
<td>No restriction in terms of numbers (average five)</td>
<td>Six to eight subjects (usually seven)</td>
</tr>
<tr>
<td><strong>HE admission process</strong></td>
<td></td>
</tr>
<tr>
<td>Institutions (disciplines) decide on HE applicants (via UCAS)</td>
<td>Centralised nationally (CAO)</td>
</tr>
<tr>
<td>Admission based on subjects and grades (mostly in prestigious universities); role of facilitating subjects</td>
<td>Admission based on GPA in best six subjects; very minor role for subjects</td>
</tr>
</tbody>
</table>
RQ2: Key findings

• More marked social class differences in the number of ‘facilitating’ subjects taken in Scotland than in Ireland. No social inequalities in other subjects (e.g. business, technical subject) in both countries.

• Social inequalities in HE entry are more strongly explained by subject choices in upper secondary education (S5/S6) in Scotland than in Ireland. Attainment matters more in Ireland than in Scotland.
Percentage point differences in the probability of HE entry between students from upper-middle and working class background

**Scotland**

- Gross social gap
- Social gap net of subject choices
- Social gap net of subject choices and performance

**Ireland**

- Gross social gap
- Social gap net of subject choices
- Social gap net of subject choices and performance

Source: Scottish and Irish School-leaver surveys, own calculations
Conclusions

- Subject choices at upper secondary level explain more of the social gap in HE entry in Scotland than in Ireland.

- The grades achieved at the end of upper secondary education explain more of the social gap in Ireland than in Scotland.

- The comparison illustrates the unintended consequences of different curriculum structures and HE entry mechanisms.
References

- Iannelli, C. and Klein, M. (2015). Subject choice and inequalities in access to Higher Education: Comparing Scotland and Ireland, *AQMeN research briefing 7* ([www.aqmen.ac.uk/education/schoolsubjectchoices](http://www.aqmen.ac.uk/education/schoolsubjectchoices))
The help provided by staff of the Longitudinal Studies Centre – Scotland (LSCS) is acknowledged. The LSCS is supported by the ESRC/JISC, the Scottish Funding Council, the Chief Scientist’s Office and the Scottish Government. The authors alone are responsible for the interpretation of the data. Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO and the Queen’s Printer for Scotland.

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http://sls.lscs.ac.uk