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Working at a different level? Curriculum differentiation in Irish lower secondary education

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Abstract

Young people in Irish schools are required to choose whether to sit lower and upper secondary exam subjects at higher or ordinary level. This paper draws on a mixed methods longitudinal study of students in twelve case-study schools to trace the school and student factors influencing take-up of higher level subjects within lower secondary education. School organisation and process are found to shape the extent to which young people actually have a 'choice' or whether this is circumscribed by the school they attend or the class group to which they are allocated. Streaming practices, which are more prevalent in schools serving socio-economically disadvantaged communities, constrain the degree of choice young people have over their subject levels, with those in lower stream classes usually allocated to ordinary level. Even where schools have mixed ability base classes, schools influence access to higher level subjects. In the middle-class and socially mixed schools, teachers are more likely to expect and encourage all students to take higher level, at least for as long as possible. In contrast, in working-class schools, there are sharp declines in the proportion taking higher level subjects as they approach the national exam taken at the end of lower secondary education. Early decisions about not pursuing higher level are found to have long-term consequences by closing off particular pathways for the future. These early decisions are often made in the absence of formal school-based guidance, thus contributing to social inequalities in young people's destinations. The findings contribute to our understanding of how curriculum differentiation reinforces social class differences in educational pathways.

Non-technical summary

Young people in Irish secondary schools sit their lower and upper secondary exam subjects at higher or ordinary level. This paper draws on a study which followed young people in twelve case-study schools from the beginning to the end of their secondary education. The study involved both quantitative survey data and qualitative group interviews, providing a more comprehensive picture of the factors influencing subject level take-up.

Half of the schools in the study used streaming, with students assigned to different ability groups for all subjects. This approach was more common in schools serving more disadvantaged communities. Within streamed schools, young people in the lower stream classes were usually allocated to ordinary level, which limited their potential achievement and the kinds of options open to them on leaving school.

Half of the schools had mixed ability base classes, though sometimes used ability grouping for specific subjects such as Maths, Irish and English. These schools were found to differ in the extent to which teachers encouraged students to take higher level for as long as possible.

Young people from working-class or non-employed backgrounds are much less likely to take higher level subjects at lower secondary level, even taking account of their prior ability in reading and maths. Over and above the effect of individual social class background, students attending schools with a concentration of working-class students were much less likely to take higher level subjects. This was partly explained by the greater use of streaming in these schools but teacher expectations and encouragement were found to play an important part.

Overall the paper shows how schools frame the opportunity for students to make choices that matter for their later educational career and school practices can act to reinforce social class inequalities in educational outcomes.

Introduction

The Irish educational system has been characterised as 'general' and relatively undifferentiated in nature (Hannan, Raffe, Smyth 1996). However, international research points to the potential for curriculum differentiation even in general systems, with such differentiation operating through subject choice (Iannelli 2013) or through the ability to take subjects at more advanced levels (Lucas 1999). In Ireland, the requirement to take lower and upper secondary exam subjects at higher or ordinary level acts as a form of curriculum differentiation, with students differing in the complexity of the material to which they are exposed and in their access to particular pathways in upper secondary education and beyond. This paper draws on a mixed methods longitudinal study of students in twelve case-study schools to trace the school and student factors influencing take-up of higher level subjects within lower secondary education. The analyses explore the way in which school organisation and process shape the extent to which young people actually have a 'choice' or whether this is circumscribed by the school they attend or the class group to which they are allocated. In doing so, the paper focuses on the extent to which approaches to ability grouping and access to higher level subjects reflect the social mix of the student population and disentangles the effects of individual social class background and school context.

The paper begins by placing the discussion in the context of previous research on the topic and by outlining the nature of the Irish educational system and the methodology adopted. The remainder of the paper explores the factors influencing subject level take-up in streamed and mixed ability schools, highlighting the influence of individual and school social class on the take-up process.

Research on curriculum differentiation

There is now a large body of research internationally on the use of streaming and tracking in secondary education, although the terms 'streaming' and 'tracking' are sometimes used interchangeably and often imprecisely (Letendre et al. 2003). Tracking refers to the allocation of students to different kinds of courses, as in Germany where students are allocated to academic and vocational tracks at the end of primary school (Bol and van de Werfhorst 2013). In the United States, tracking is often used to refer to students taking different kinds of courses within the same school but it is sometimes employed to highlight the fact that some students take courses at more advanced levels than others (Gamoran and Mare 1989; Lucas 1999). In Britain and Ireland, the focus has been placed on 'ability grouping', which encompasses both streaming (a more rigid form of grouping in which students take all subjects from Maths to Physical Education in the same 'higher' or 'lower' stream class) and 'setting' (a more flexible form of grouping whereby students may be in a 'lower' group for Maths but not for English) (Ireson and Hallam 2001).

Much of the international research on ability grouping focuses on student outcomes, especially academic achievement. Students in lower streamed classes are found to be exposed to less demanding work and hence achieve lower exam grades, have

lower educational aspirations and are more likely to drop out of secondary school than those allocated to higher stream classes (Boaler et al. 2000; Gamoran et al. 1995; Tach, Farkas 2006; Kerckhoff 1986; Oakes 1985; Werblow et al. 2013). Given that working-class and minority group students are more likely to be allocated to lower ability groups, streaming is found to exacerbate social inequality between students (Gamoran and Mare 1989; Oakes 1990). The rationale for streaming has been subject to much less scrutiny than its consequences, though Oakes et al. (1992) relate it to school personnel assuming that student abilities are fixed on entry while Gamoran et al. (1995) describe it as an organisational response to student diversity. Indeed, one study of US high schools indicates that more elaborated tracking systems are used in larger schools and ones where in-coming students have greater variation in test scores (Kelly, Price 2011). This latter study shows no relationship between the prevalence of tracking and the socio-economic composition of the student body in contrast to earlier research by Lucas (1999) which indicates that tracking is more common in more socially diverse schools. Indeed, research on school social mix has largely been conducted in parallel to that on ability grouping and the potential interrelationship between the two features has rarely been explored, a lacuna that is addressed in this paper.

There has been a good deal of debate about whether school social mix has an effect on student outcomes over and above the influence of individual social class background (see, for example, Nash 2003; Harker and Tymms 2004). However, some studies have shown such an effect, especially on academic outcomes (Rutter et al. 1979; Willms 1986). The processes underlying these differences have been variously identified as the existence of an orderly learning climate, teacher motivation and expectations, and the provision of more advanced college-oriented courses (Opdenakker and Van Damme 2007; Rumberger and Palardy 2005; Dumay and Dupriez 2007; Kalogrides et al. 2013). These findings would suggest that analysing the extent to which the provision and take-up of more advanced courses vary by school social mix is a fruitful avenue of exploration. The following section identifies the key features of the Irish educational system as context for the later analysis.

The Irish educational system

Young people in Ireland make the transition from primary to secondary school at around 11 or 12 years of age. There are three types of school in the Irish secondary landscape: voluntary secondary schools (initially, at least, with an orientation to more academic subjects and largely set up by religious orders), vocational schools (set in the 1930s to foster skill development among working-class young men) and community/ comprehensive schools (set up to try to bridge the divide between academic and vocational provision). These different categories of school have different ownership and management structures, but are largely State funded, now follow the same State-prescribed curriculum and prepare students for the same State public examinations. Despite this common curriculum framework, the historical legacy of the different school sectors continues to act as a factor in school choice. A survey of lower secondary students indicated that almost half of the cohort was not attending their nearest or most accessible school (Hannan et al. 1996), a finding

which suggests quite a remarkable degree of active selection of schools on the part of parents and children. Middle-class parents are more likely to make active school selections than other social groups. The factors influencing school choice have been relatively under-researched in the Irish context but school reputation, broadly defined, plays a strong role (Smyth et al. 2001). Where schools are over-subscribed, the admissions criteria, such as being on a waiting list and having an older sibling attend the school, tend to favour those with greater insider knowledge of the system (see Smyth et al. 2009). The interaction between parental choice patterns and school admission practices (where they are over-subscribed) has accentuated differences in composition between school sectors and among individual schools. In addition, the persistence of a relatively large number of single-sex schools acts as a further source of differentiation in school choice patterns. Vocational schools have continued to attract a higher proportion of pupils from working-class and unemployed backgrounds while a disproportionate number of middle-class pupils attend voluntary secondary schools (Hannan, Smyth et al. 1996; Williams et al. forthcoming).

Lower secondary education comprises a three-year phase, culminating in a nationally standardised exam, the Junior Certificate. Six subjects (including Maths, English and Irish) are taken on a compulsory basis. The remaining subjects studied reflect the interaction of school provision, approach to subject choice and individual choice on the part of young people. At lower secondary level, young people can study Irish, English and Maths at higher, ordinary or foundation level while the other exam subjects can be taken at higher or ordinary level. Students typically take 11 or 12 subjects in the Junior Certificate exam. After the Junior Certificate exam, students may take a 'Transition Year' before embarking on the two-year upper secondary programme. The Transition Year (TY) programme was developed to provide an opportunity for wider educational, personal and social development in an otherwise exam-focused system. The two year upper secondary programme culminates in the Leaving Certificate exam.[1] Students typically take seven exam subjects for the Leaving Certificate; Irish and Maths can be taken at higher, ordinary or foundation level, and the remaining subjects at higher or ordinary level. As at lower secondary level, young people are required to study Irish, English and Maths. The Leaving Certificate can be characterised as a very high stakes exam since the grades achieved influence access to higher education and to high quality employment.

Study methodology

This paper draws on data from the Post-Primary Longitudinal Study (PPLS) conducted over the period 2002 to 2008. The initial stage of the PPLS involved a postal survey of all (over 700) secondary school principals, with a response rate of 78 per cent. The survey data were used to identify case-study schools for a more in-depth analysis of young people's experiences in the early years of secondary education. These schools were chosen on the basis of three dimensions: the support structures used to help students integrate into the school, the school's approach to

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[1] A small proportion, around 5-6 per cent of the cohort, takes the alternative Leaving Certificate Applied programme, which adopts a more hands-on approach to learning and assesses students on the basis of coursework as well as exams.

subject choice and the approach to ability grouping. The purposive sample was designed to capture variation in these three dimensions along with a mixture in terms of gender and social mix as well as region. One of the selected schools discontinued their involvement during the school year while another decided not to be involved in the longitudinal component of the study. In order to capture diversity across different school contexts, two additional schools (Harris Street and Argyle Street) were asked to participate in the second year of the study. There were limitations given the absence of information on the first year experiences of students in these schools, although information on the approaches used to facilitate the transition process was collected from key personnel in these schools. Table 1 provides an overview of the case-study schools.

Table 1: Characteristics of the case-study schools

School	Size	Sector	Social mix	Subject choice (lower secondary)	Ability grouping
Argyle Street	Large	Community/comprehensive	Mixed	Later	Streamed / banded
Barrack Street	Small	Girls' voluntary secondary	Working-class	Early	Mixed ability
Belmore Street	Large	Girls' voluntary secondary	Mixed	Later	Mixed ability
Dawes Point	Small	Boys' voluntary secondary	Working-class	Early	Streamed / banded
Dawson Street	Medium	Community/comprehensive	Mixed	Early	Mixed ability
Dixon Street	Large	Vocational	Working-class	Later	Streamed / banded
Fig Lane	Large	Coeducational voluntary secondary (fee-paying)	Middle-class	Later	Mixed ability
Harris Street	Large	Girls' voluntary secondary	Middle-class	Later	Mixed ability
Hay Street	Small	Vocational	Working-class	Early	Streamed / banded
Lang Street	Small	Vocational	Working-class	Later	Streamed / banded
Park Street	Large	Boys' voluntary secondary	Mixed	Early	Streamed / banded
Wattle Street	Small	Boys' voluntary secondary	Mixed	Early	Mixed ability

Note: Pseudonyms are used to identify the schools.

Within each of the case-study schools, in-depth interviews using a semi-structured interview schedule were conducted with key personnel (such as school principals,

guidance counsellors, year heads and class tutors) every year, covering topics relevant to the stage of the student cohort. The cohort of students to be included in the study started secondary school in September 2002. Self-completion questionnaires were administered to students at the beginning (September) and end (May) of first year, and on an annual basis (around January/February) thereafter (for further details, see Smyth, 2016). In addition, Drumcondra Level 6 standardised reading and computation tests (designed for sixth class students in primary school) were administered to first year students in September and May to assess baseline achievement levels as well as academic progress over first year. In order to more fully explore students' own experiences, every year a group of six students from each class was selected at random by the project team and students were interviewed within their class groups. Interviews with students and key personnel were recorded and transcribed (for further details, see Smyth 2016).

Analyses in this paper draw on the national survey of school principals, questionnaire data from students and interviews with key personnel and students at a number of time-points during the course of lower secondary education. Together, the quantitative and qualitative data provide a more comprehensive perspective on the processes shaping subject level take-up. The survey data are used to examine the relationship between social class and level take-up as well as student perceptions of their degree of choice of levels while the qualitative interviews provide more nuanced insights into choice processes and potential constraints on such choices. The two kinds of information are used to address the following research questions:

1. How do schools frame the take-up of subject levels within lower secondary education?
2. To what extent does subject level take-up vary by individual social class background and school social mix?
3. To what extent does ability grouping reinforce social class inequalities in level take-up?

Ability grouping

Schools vary in the way in which they allocate students to base classes. They may employ streaming whereby students of similar assessed ability are grouped into classes, ranked from 'higher' to 'lower'. They may use banding, a somewhat looser form of streaming, where pupils are divided into broad ability bands (for example, two higher and two lower classes) but classes within these bands are mixed ability. Alternatively, students may be placed in mixed ability base classes, based on random (e.g. alphabetical) allocation or, more rarely, to achieve an intentional mix across classes. In Ireland, the use of ability-based differentiation (hereafter referred to as 'streaming') in secondary schools has declined over time, being employed for 60 per cent of first year students in 1980, declining to 44 per cent by 1993, with a further decline to 30 per cent in the school year 2001/2, the time when the PPLS student cohort entered secondary education (Hannan et al. 1983; Hannan et al. 1996; Smyth et al. 2004). In parallel with this decline in the use of streaming, rigid ability grouping has become increasingly concentrated in schools serving more

socio-economically disadvantaged populations. In 1980, there was no difference in median social class between streamed and mixed ability schools (Hannan et al. 1983). However, survey findings in 2001 reveal significant social differentiation in the use of streaming (Smyth et al. 2001). The use of streaming is partially driven by logistical factors, being much more common in larger schools. However, schools that are designated disadvantaged (that is, those who receive additional government funding because they have a high concentration of students from disadvantaged backgrounds) are more than twice as likely to use streaming as other schools. The use of streaming also increases in line with perceived literacy difficulties, being more common in schools where more than 30 per cent of the student intake is deemed to have such difficulties. Some of the initial difference between disadvantaged and non-disadvantaged schools is related to the perceived level of literacy difficulties among the first year intake but there is still a substantial effect of the concentration of disadvantage on the use of streaming.

Among the case-study schools, six used streaming (or banding) while six had mixed ability base classes. In keeping with the national pattern, the schools using streaming differed in the way they allocated students to classes, with some schools relying on standardised tests before entry, others setting their own curriculum-based exams and others taking account of primary school records (see Smyth et al. 2001).[2] The profile of the schools using streaming meant that working-class young people, especially boys, were more likely to be taught in streamed schools. Within these schools, working-class young people were under-represented in higher stream classes; a third of those in higher stream classes in the case-study schools were from professional backgrounds compared with 14 per cent of those in lower stream classes.

Streaming and level take-up

In the case-study schools using streaming, a very strong relationship was found between the class to which students were allocated and the level at which they took subjects. Lower stream classes were most commonly allocated to ordinary or foundation level while higher stream classes were more likely to be able to access higher level subjects, though school staff varied in whether they attributed this to school policy or student preference.

> *They're [lower stream] no way ambitious that way … so yeah it's mainly foundation, foundation in Irish, English and Maths and then pass [ordinary] in all the other subjects. (Staff, Dawes Point, working-class, streamed classes)*

> *The fact that they are an A class they take higher levels, you know, and we take it right through to the Mocks [Junior Certificate practice*

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[2] Once allocated to a class group, students tended to remain within that class for the duration of lower secondary education. However, one school which used streaming reallocated some students on the basis of mid-term exam results in first year.

exams]. … If they didn't do well in higher [in the mocks] and if we feel they are capable of better, we keep them at it. We push them; we would push them more than give them the choice to take ordinary. (Staff, Park Street, socially mixed, streamed classes)

Although there was a strong link between class placement and access to higher level subjects, a number of students, especially in the higher stream classes, reported some degree of choice in take-up:

Interviewer: And how is it decided what level you're going to take?

You decide yourself.

The teachers can advise you and talk to your parents and stuff, but at the end of the day it's up to you. (Higher stream class, Dawes Point, working-class, 3rd years)

However, in keeping with the accounts of staff, teachers were seen as having greater power in the decision-making process than students:

Interviewer: And who decides what level you take?

It's a mix between us and the teachers, the teachers have more influence than us. If a teacher doesn't want you in their class, you're gone so. (Higher stream class, Hay Street, working-class, 3rd years)

As a result, students in higher stream classes took an average of 5.9 higher level subjects for the Junior Certificate exam compared with 4.7 for those in middle stream classes and just 0.2 in lower stream classes. In the interviews with students, the lower stream groups were more likely to report constraints on their choice of subjects and subject levels, reflecting the differential learning opportunities open to them.

We are not allowed to pick.

Because we are slow.

Yes, we are in a slow class.

[Somewhat later in the interview]

When you are in C and D you can't pick. When you are in A or B you are allowed pick.

Interviewer: Do you think that it is fair that only…?

It is not. Because then people are saying to you that you are slow and all. (Lower stream class, Dixon Street, working-class, 1ˢᵗ years)

Labelling as an influence on level take-up

Ability group allocation can serve as a strong signal of their academic abilities to young people, who respond by adapting their educational expectations (Karlson, 2016). Students in the case-study schools were highly aware of their place in the school pecking order, with day-to-day processes within the classroom playing an important role in reinforcing these labels. These processes centred on the pace of instruction, the workload expected of students and the quality of interaction between teachers and students. The main rationale for ability grouping is that it allows teachers to cater for the needs and abilities of students in a more or less homogenous group. However, student reports indicated that streaming did not result in a close match between pace of work and perceived need. Over half (54%) of those in lower stream classes felt that their teachers went too slowly with their class, fuelling boredom and even disengagement, while 45 per cent of those in higher stream classes felt their teachers went too quickly, making it difficult to keep pace with the coverage of course material:

In every class they always do a chapter of a book and then go onto a different chapter even if you don't understand it. ... You just get mixed up. (Higher stream class, Dixon Street, working-class, 1ˢᵗ years)

Furthermore, streaming did not reduce the heterogeneity of experience within and across classes since a minority (21%) of higher stream groups reported the pace of instruction to be too slow while 28 per cent of lower stream groups reported a pace of instruction that was too fast. Thus, attempting to have a homogeneous class group through streaming did not appear to reduce heterogeneity of experience within the class.

Curriculum differentiation and resulting labels based on perceived ability contributed to mutually reinforcing low teacher and student expectations in lower stream classes:

We don't do our homework so we don't get it. Teachers know we don't do it so they don't bother checking it.

We don't get homework.

We never did get homework.

We're sort of the thick class. (Lower/middle stream, Dixon Street, working-class, 3ʳᵈ years)

Thus, the gap in investment of time in homework and study between the lower stream and the top and middle streams was found to grow over time. In first year, young people in higher stream classes spent an average of 15 minutes more per evening on homework/study than those in lower stream classes but by third year (when students were preparing for the lower secondary exam), this gap had increased to 38 minutes on average. This pattern is likely to reflect differences in the homework assigned to different class groups and differences in the time 'voluntarily' spent on study by these groups. Students assigned to lower stream classes had a distinctive profile in other respects too: they reported more negative interaction with teachers, greater levels of misbehaviour, had lower educational expectations, and poorer academic outcomes (Smyth, 2016), an issue discussed further below.

In general, rigid ability grouping (streaming) resulted in clear curriculum differentiation, with lower stream classes markedly less likely to access higher level courses (and having more restricted subject choice), which in turn contributed to a climate of lower expectations on the part of teachers and students. Given the differences in the social class profile of higher, middle and lower streamed groups outlined above, this contributed to greater social inequality *within* schools in outcomes such as retention and exam performance which were crucial to later educational and post-school success. The fact that working-class schools were more likely to make use of streaming operated as a key factor in contributing to inequalities *between* schools in these same student outcomes. The relative influence of school social mix and ability group is unpacked in greater detail below. Before examining these processes, the following section examines whether access to higher level subjects is indeed equitable in mixed ability schools.

Mixed ability classes

The use of mixed ability base classes does not necessarily translate into students experiencing mixed ability teaching across all subjects. The national survey of principals indicated that 17 per cent of schools who had mixed ability classes used setting (that is, separate higher and ordinary level classes for particular subjects) for one or more subjects for first year students. The use of setting for one or more subjects increased by Junior Certificate year, taking place in 86 per cent of schools with mixed ability base classes. Setting was more prevalent in Mathematics, Irish and English than in other exam subjects. This appeared to reflect the concern about having three different levels in these subjects (higher, ordinary and foundation) compared to two levels for other subjects. Furthermore, all students take these three subjects, making it logistically easier to divide students into different groups.

School approaches to level allocation

Both school staff and students were asked how taking particular subject levels was decided in their school. Staff tended to emphasise the role of negotiation and

discussion between the subject teacher and the student, characterising the teacher's role as one of advisor.

> *They [students] more or less decide themselves, but I advise them, that you're not really the honour [higher level] standard this year or last year and I would recommend ordinary level. Some of them if they were struggling with the higher level they'd make their own decision to go to ordinary level. (Staff, Fig Lane, middle-class, mixed ability classes)*

The subject teacher decides that [the level] with the child … I suppose we try to base it on the marks with the girls themselves, nobody forces anything on them, but they look at the results again and how the teacher feels about them during that third year and the teacher will advise them then on whether they should [take a specific level]. (Staff, Barrack Street, working-class, mixed ability classes)

Parental input into the choice of subject levels was mentioned by key personnel in most of the case-study schools. This input was seen as particularly relevant if there was a disagreement between the subject teacher and the student as to which level they should be taking for the Junior Certificate exam:

> *Ultimately if a parent comes and says she must do honours, then even if it's against the advice of the teacher and me, well then that's her call. (Staff, Barrack Street, working-class, mixed ability classes)*

> *Usually the teacher tries to advise them but ultimately the decision is actually the students but most of them, the majority of them will follow the teacher's advice. And if there is a problem, you'd have to discuss it then with the parents. (Staff, Harris Street, middle-class, mixed ability classes)*

In five of the case-study schools, teachers indicated that, as far as possible, all students were expected and encouraged to take higher level in their exam subjects. All of the schools that adopted this approach were middle-class or mixed in their social intake:

> *It is assumed straight off that most of them are going to do honours [higher] level at Junior Cert cycle. But then through the years you'll obviously find children who are struggling and they will do pass [ordinary level]. But the vast majority of children here take honours in most of their junior cycle subjects unless there's a very obvious*

weakness, except … in Irish … and … Maths. (Staff, Harris Street, middle-class, mixed ability classes)

I think the teachers try to promote the honours paper right up till the very end, even right throughout the Mock exams. (Staff, Wattle Street, socially mixed, mixed ability classes)

Student influence over the level taken

In third year, students themselves were asked about the basis on which it was decided whether they took higher or ordinary level, initially using Maths as an example. In the survey responses, around a third of young people reported having no say in the Maths level they took, a pattern that was not surprisingly most common in (but not limited to) schools using streaming (being reported by 51% of those in higher stream classes compared with 25% of those in mixed ability base classes).

> We didn't decide.
> They [the teachers] told us.
> They decided for us, we wanted to decide for ourselves like. (Lower stream class, Lang Street, working-class, 3rd years)

In only one of the schools did school staff themselves point to the fact that subject levels were determined by the teacher:

Interviewer: In terms of the level at which students take their Junior Cert subjects, how is that decided?

Well, it would be mainly determined by the teacher. (Staff, Dixon Street, working-class, streamed classes)

Among students who reported having a choice of Maths level, parents emerged as the most important source of advice, with almost half (47%) citing their mother as a source of advice and 43 per cent their father. Although the Maths teacher was seen as an important influence in helping students to make their decision (with 41% of young people mentioning them), students were somewhat more likely to report receiving advice from their parents. Only a small proportion (11%) felt their friends were very important in helping them decide while the guidance counsellor was deemed very important by only a very small group of students (just 4%), reflecting the lack of access to formal guidance at lower secondary level.

The group interviews with students provided a more nuanced understanding of the relative influence of different groups in the negotiation process.

> *The teacher advises you on what to do and then you go home and talk to your parents. (Harris Street, middle-class, mixed ability, 3rd years)*

In one socially mixed boys' school, Wattle Street, students indicated a strict 'rationing' of higher level places to those who had achieved a particular grade in their previous exams, an issue that had not been highlighted in interviews with staff:

> Everyone over a C is in honours. (Wattle Street, socially mixed, mixed ability, 3rd years)

> *Irish and English, I think the school just chose.*
>
> *It's stupid though because in Irish I was put in pass and I think they went by the results and I think I got like ninety something percent and I was put in pass. (Wattle St, socially mixed, mixed ability, 3rd years)*

In keeping with the accounts of key personnel, students in several schools catering for socially mixed or middle-class student populations reported a strong emphasis on taking higher level across all subjects:

> They [teachers] would go what do you want to do, and if you say like pass they go 'oh well, I think you are able for honours'. (Belmore Street, socially mixed, mixed ability, 3rd years)

> In first year after your exams you get divided into honours and pass Irish and honours and pass Maths and then the other subjects you kind of take on as honours unless you find them difficult. (Fig Lane, middle-class, mixed ability, 3rd years)

> Everyone was encouraged to do the higher level for the Mocks [practice Junior Certificate exams]. (Harris Street, middle-class, mixed ability, 3rd years)

Figure 1: Average number of higher level subjects taken by school for students in the second lowest reading quintile on entry to secondary education

Variation in level take-up across schools

The proportion of students taking higher level subjects reflected the complex interplay of school policy, teacher expectations and student preferences. Figure 1 shows the average number of higher level subjects taken by young people in the ten schools for which reading test scores on entry are available. Because the schools vary markedly in the ability levels of their incoming students, the figure focuses only on those students who fell into the second lowest reading quintile (fifth) in order to compare like with like. Take-up of higher level subjects is found to reflect the social composition of the school as well as the approach to ability grouping. In general, young people in streamed schools take fewer higher level subjects on average, reflecting the constraints on access for middle and lower stream classes already discussed. Schools serving working-class populations typically have a lower take-up of higher level subjects, although there is considerable variation, ranging from an average of 1.1 subjects in Hay Street, a highly disadvantaged school using streaming, to 4.6 subjects in Barrack Street, a working-class girls' school which has mixed ability base classes. There is considerable variation too among the socially mixed schools, even where they had mixed ability base classes. In Belmore Street, a girls' school, students were encouraged to take higher level subjects for as long as possible, a situation which contrasts markedly with that in Wattle Street, where only a small number of first year students were allowed to take higher level with access being determined on the basis of their first year exam results. What is striking is the level of take-up in the middle-class school, Fig Lane. In this school, it is taken for granted that students, even those with relatively low reading test scores on entry, take higher level subjects unless they explicitly opt out.

Curriculum differentiation in streamed schools was largely static, with very little movement once students were assigned to their initial class groups. However, in mixed ability schools, there was some fluidity in the levels at which young people took subjects over the course of lower secondary education, but students referred more often to 'dropping down' in a subject as curricular differences posed a constraint to 'moving up':

> *If you didn't feel like you were doing well enough, you could drop down. (Argyle Street, socially mixed, mixed ability, 3rd years)*

In fact, differential curriculum coverage across different set classes placed constraints on students moving 'upwards' in level:

> *So like my Maths teacher told my Mam that I should have been put into honours in first year and now it's too late because they have done all the stuff in Maths. (Harris Street, middle-class, mixed ability, 3rd years)*

Figure 2: Proportion intending to take higher level Irish, English and Maths over the course of lower secondary education
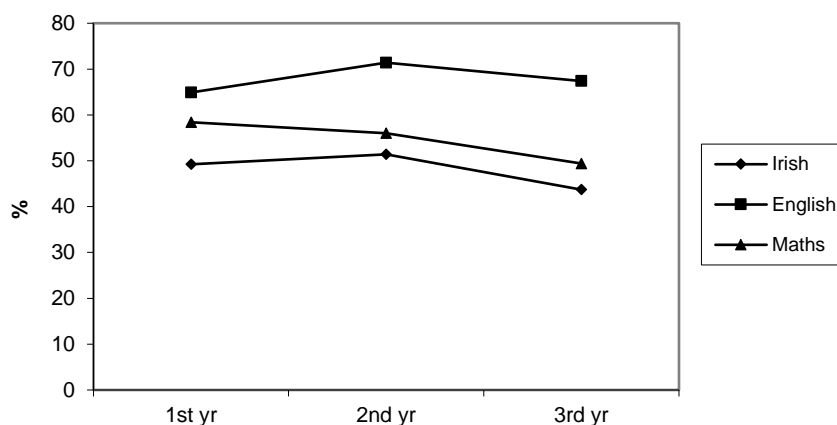
'Dropping' subject levels

The practice of dropping levels was found to vary by individual social class background as well as the social mix of the school. The survey data point to sharp declines in the proportion taking higher level Maths and Irish between second and third year as young people approach the State exam (Figure 2). There is also a decline in higher level English take-up but from a much higher base. Students from

working-class backgrounds were more likely to drop higher Irish, English and/or Maths than students from middle-class backgrounds; a tenth of those from higher professional backgrounds dropped higher level Irish compared with a third of those from working-class or unemployed households. School social mix also played a significant role: for example, 65 per cent of students in working-class schools dropped from higher level Irish compared with 12 per cent in mixed/middle-class schools. Furthermore, just over half of students in working-class schools dropped higher level Maths compared with just over a tenth of those in mixed/middle-class schools. Dropping higher level Irish, English and Maths was relatively uncommon across a number of schools, including Harris Street and Fig Lane, both predominantly middle-class schools. Thus, the nature of curriculum differentiation, especially in mixed ability schools, was increasingly reshaped along the fault lines of social class (school and individuals) as students moved through lower secondary education.

Multilevel analyses of curriculum differentiation and social class

Multilevel models were used to look at the simultaneous influence of individual social class and school social mix on the take-up of higher level subjects and on the extent to which these effects were mediated by earlier achievement levels and by the school's use of ability grouping. These models were derived only for the ten schools for which reading and mathematics test scores on entry were available. The dependent variable, number of higher level subjects taken in the Junior Certificate (lower secondary) exam, varied from none to eleven. Two sets of models are presented in Table 2. The first examines the 'raw' effect of individual social class background and school social mix on the number of higher level subjects taken. The second model explores (a) whether these class differences are (partially) explained by prior differences in academic skills on entry to secondary education, and (b) whether these differences are explained by the school's approach to allocating students to particular ability groups.

Table 2: Multilevel model of the factors influencing take-up of higher level subjects within lower secondary education

	Model 1	Model 2
Constant	4.699	4.012
Female	0.675*	0.611*
Social class:		
Higher professional	2.253***	0.641±
Lower professional	1.444**	0.596±
Other non-manual	0.994*	0.276
Farmer	2.081***	1.054*
Skilled manual	0.797±	0.094
Non-employed	0.533	0.515
Class unknown	-1.337*	-1.132*
(Ref.: Semi/unskilled manual)		
School social mix:		
Middle-class	1.272	1.300
Working-class	-2.621***	-1.586*
(Ref.: Socially mixed)		
Reading test score on entry to secondary education (centred on mean)		0.092***
Maths test score on entry to secondary education (centred on mean)		0.120***
Class allocation:		
Higher stream		1.164*
Middle stream		0.220
Lower stream		-1.775**
(Ref.: Mixed ability base class)		
School level-variance	0.852±	1.060*
Student-level variance	7.884***	4.788***
No. of schools	10	10
No. of students	639	639

Female students are found to take more higher level subjects (by about 0.6 subjects on average) than males of equivalent social backgrounds (Table 2, Model 1). This pattern is consistent with findings from the broader study upon which this paper draws concerning the greater levels of school engagement and investment of time in homework and study found among girls (for a more detailed discussion of gender patterns in this study, see Smyth 2016). There is clear social differentiation in take-up, with those from higher professional and farmer[3] backgrounds taking two more higher level subjects than those from semi- or unskilled manual backgrounds. The lower take-up among those in the 'class unknown' group is likely to reflect the highly disadvantaged profile of those who are too remote from the labour market to have a valid social class. Taking account of individual social class, the middle-class school,

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[3] The pattern for farm families reflects the well-documented strong orientation to education among this social group (see, for example, McCoy and Smyth 2011).

Fig Lane, does not differ significantly from the socially mixed schools in take-up. However, even controlling for student social class, attending a working-class school is associated with a much lower take-up of subjects at an advanced level; the gap is large, at over 2.5 subjects.

Model 2 examines whether the social class patterns found reflect differences in prior achievement coming to secondary school and/or the role of class allocation in shaping access to higher level subjects. The influence of social class on level take-up is largely mediated by the higher academic attainment of students on entry to first year. However, some advantage is evident for the farming and, to some extent, professional groups, even taking reading and maths test scores into account. The effect of attending a working-class school is found to be partially mediated by ability grouping, with the gap reducing from 2.6 to 1.6 subjects. Taking account of prior achievement, those in higher stream classes take more than one subject more at higher level, and those in lower stream classes almost two subjects less, than those in mixed ability base classes. Thus, the approach to ability grouping emerges as an important mediator of the effect of school social mix. Even taking account of social mix, a significant difference is found between individual schools, reflecting the nuance of approaches to higher level access documented earlier in the paper.

Subject level take-up: why does it matter?

In a context where the majority of young people complete upper secondary education, the lower secondary exam (the Junior Certificate) is increasingly seen as a relatively low stakes exam. Why then should curriculum differentiation at this level matter? The findings point to two interrelated reasons: the way in which level take-up influences academic outcomes and the role that lower secondary take-up plays in shaping access to higher level subjects at upper secondary level.

Figure 3: Proportion of early school leavers and (net) lower secondary education grade point average by ability group of class
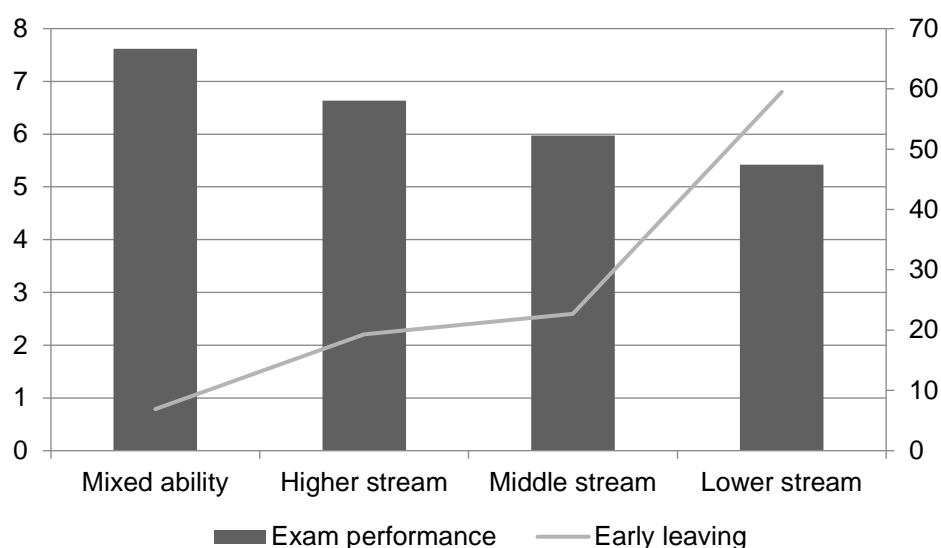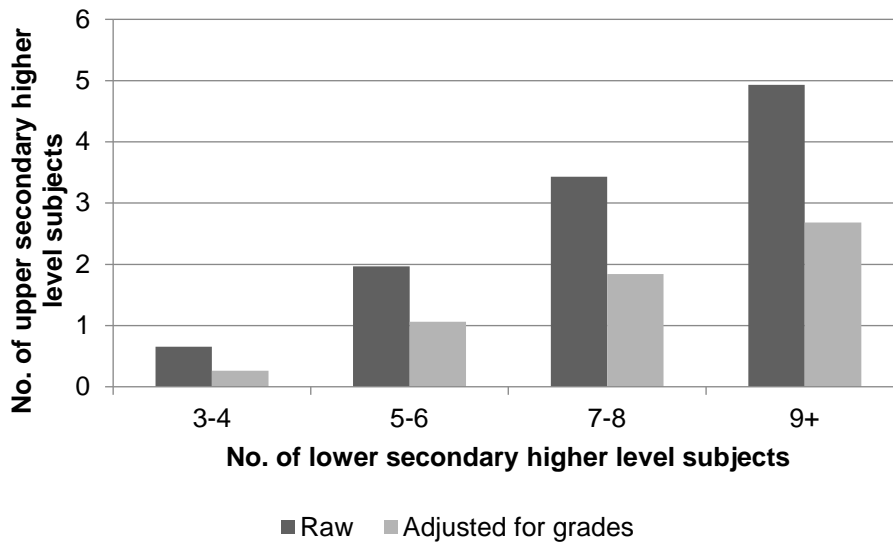

Note: The figures for early school leavers are raw percentages. Grade point average controls for gender, social class and prior reading and maths test scores.

Influence on lower secondary achievement

The ceiling set on student achievement by differential access to higher level subjects coupled with a climate of low expectations in middle and lower stream classes was found to have profound consequences for student outcomes. Figure 3 shows the difference in lower secondary (Junior Certificate) achievement levels across ability groups, controlling for a range of factors including reading and maths achievement on entry to secondary education. A grade point average, with a minimum value of zero and a maximum value of 10, is calculated on the basis of subject level and grade received; this score is then averaged across all exam subjects taken. There is a very substantial difference in performance between higher and lower stream classes, a difference of over two grade points per subject. It is noteworthy that higher stream classes actually achieve a lower grade point average than those in schools with mixed ability base classes. Earlier research using data collected in the mid-1990s indicates no difference between mixed ability and higher stream performance (Smyth 1999). The shift appears to reflect the greater concentration of streaming in more socially disadvantaged schools, which tend to have lower achievements levels overall. In addition, reflecting the disengagement emerging among lower stream classes (see above), a very significant proportion, 60 per cent, of this group leave school before completion of upper secondary education (Figure 3); this compares with a drop-out rate of 7 per cent for mixed ability classes.

Note: Reference is those who took fewer than three higher level subjects in the Junior Certificate exam.

Influence on later subject level take-up

Subject level take-up in the first year of upper secondary education was found to be strongly influenced by the levels taken at lower secondary level. The nature of the curriculum meant that it was quite difficult for a student to move 'upwards' in a subject over the transition to upper secondary education:

> *You kept going whatever you'd done for Junior. (Dawson Street, socially mixed, 5th years)*

> *Like if you done foundation Maths in the Junior Cert you do foundation level now. (Dawes Point, working-class, 5th years)*

Figure 4 illustrates the relationship between take-up of higher level subjects across the two stages of secondary education. Column 1 shows that those who had taken nine or more higher level subjects for the lower secondary exam took, on average, 4.9 more higher level subjects for the Leaving Certificate (upper secondary) exam than those who had taken fewer than three such subjects. This pattern is, of course, likely to reflect differential levels of academic performance. Column 2 adds a control for lower secondary grade point average. The coefficients for subject level take-up become smaller but remain substantive. Thus, the structure of curriculum

differentiation at lower secondary level channels young people into related subject levels for upper secondary education, a pattern that reinforces social class inequalities in access to higher level subjects and therefore performance. The upper secondary exam, the Leaving Certificate, is an extremely high stakes exam which determines entry to higher education and is also by employers in relation to recruitment decisions (Smyth et al. 2011) so channelling into particular subject levels tends to reinforce longer term social class inequalities.

Conclusions

This paper builds upon the growing body of work on curriculum differentiation within general educational systems (see, for example, Iannelli 2013) to look at its relationship with individual social class and school social mix. The analysis draws on a mixed methods longitudinal study of students in twelve Irish secondary schools to trace the school and individual factors which shape decisions about subject levels. Schools are found to frame student decisions about subject levels, with some schools permitting students little or no choice while in others students are encouraged to take subjects at higher level for as long as possible. Schools with a concentration of working-class students are more likely to use streaming, a rigid form of ability grouping, which assigns young people to 'higher' or 'lower' groups across all subjects. In these schools, it is assumed that those in the higher stream will have access to higher level subjects while those in the lower stream will take subjects at ordinary or foundation level only. This curriculum differentiation tended to fuel disengagement among those students who had been labelled as lower performing and served to set a ceiling on their potential academic performance, with negative consequences for their pathways into upper secondary education and beyond. The greater use of streaming in working-class schools, along with the greater likelihood of working-class students within these schools being allocated to the lower stream, served to increase social inequality in experiences and outcomes within and between schools. In contrast, students in middle-class or socially mixed schools were more likely to be encouraged by their teachers to take higher level subjects for as long as possible. All of the mixed ability schools used setting for one or more subjects, usually Irish, English and Maths. While setting did not have the inflexibility associated with streaming, early assignment to set groups and strict rationing of the number of places on the part of some schools could serve to reduce take-up of higher level subjects.

In the lower secondary exam, the Junior Certificate, young people from middle-class and farming backgrounds take significantly more higher level subjects, a pattern that is largely but not entirely explained by higher levels of prior academic achievement. A very significant gap in take-up of higher level subjects is evident between working-class and socially mixed or middle-class schools. This gap is partly explained by the greater use of streaming in working-class schools but, even taking this into account, a sizeable difference remains, suggesting a very different expectational climate in schools serving more disadvantaged populations. It is worth noting that the effect of school social mix on curriculum differentiation is found to be greater than that of individual social class background, supporting the view that schools come to exhibit a

certain institutional habitus (Smyth, Banks 2012). This paper therefore represents a contribution to the literature on school contextual effects and the mechanisms through which they exert their influence on student outcomes.

While in itself the Junior Certificate exam can be characterised as low stakes, curriculum differentiation at lower secondary level is found to have significant consequences for access to higher level subjects within upper secondary education and thus for performance in the high stakes upper secondary exam. Differences in the take-up of higher level subjects at lower secondary level by social class background and, even more markedly, by school social mix therefore have significant long-term implications for young people's access to valued post-school pathways. The relationship between school social mix and curriculum differentiation has rarely been explored. In fact, the small number of existing studies (for example, Lucas 1999, and Kelly, Price 2011) have pointed to the role of diversity rather than disadvantage in shaping the school's approach to curriculum differentiation. The findings presented here point to the potential for a comparative research agenda which would investigate the relationship between (different types of) curriculum differentiation and school social mix, linking two frameworks to better understand the production and reproduction of social inequalities within the educational system.

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