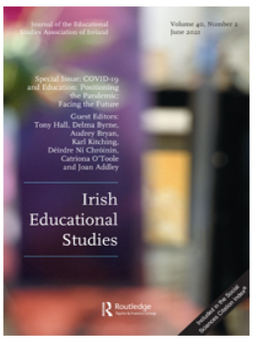

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Magnifying inequality? Home learning environments and social reproduction during school closures in Ireland

Gretta Mohan [ab*], Eamonn Carroll[a], Selina McCoy[ac], Ciarán Mac Domhnaill[abd] and Georgiana Mihut[a]

[a]*Department of Social Research, Economic and Social Research Institute, Dublin, Ireland;* [b]*Department of Economics, Trinity College Dublin, Dublin, Ireland;* [c]*Department of Sociology, Trinity College Dublin, Dublin, Ireland;* [d]*School of Economics and Finance, University of St Andrews, St Andrews, UK*

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COVID-19 school closures have seen the homeplace become a school-place for students and their families in Ireland. This paper presents research on the resources and supports available for students to engage with learning in their home environments. Evidence from a nationally representative survey comprising one third of second-level school leaders, conducted during the first school closures in 2020, shows that attendance and engagement appears to be influenced by the educational level of parents/guardians. The association between parental education and student engagement was stronger for Junior Certificate students but was not statistically evidenced for Leaving Certificate students. Qualitative evidence sheds further light on inequalities which characterised students' experiences of online and remote learning. Viewing these developments through a social reproduction framework, this study argues that unequal home learning environments may magnify existing inequalities. To prevent a return to the classroom with more classed outcomes, it is imperative that policy, planning and investment strive to mitigate the impact of COVID-19 on educational inequality.

Keywords: COVID-19; home learning environments; second level; student engagement; parental education

Research background and rationale

To contain the spread of COVID-19, the Irish government closed all schools for several months during the first half of 2020, and again early in 2021. Concerns were raised that this could exacerbate existing inequality between students from different family backgrounds (UNESCO 2020; European Commission 2020). Research from Ireland and elsewhere is now showing that distance learning is no substitute for in-person learning, and the most vulnerable students have been hardest hit (OECD 2020; Mohan et al. 2020; Walsh et al. 2020). Drawing on evidence from a

*Corresponding author. Email: gretta.mohan@esri.ie

nationally representative survey and interviews with school leaders, we examine the extent and nature of inequality in home learning environments (HLEs).

Access to requisite learning resources at home (technological and otherwise), and students' capacity for self-regulated learning are essential for the success of distance education. Evidence from the UK suggests that gaps both in learning resources at home and in-school supports compound inequalities between advantaged and disadvantaged students (Andrew et al. 2020). These inequalities are shaped by systemic factors which preceded the pandemic, as well as added burdens that the pandemic placed on disadvantaged families. Parents without a degree reported lower levels of confidence in managing home-education (Walsh et al. 2020). Digital poverty may further widen gaps between families' abilities to support their children during abrupt (and repeated) shifts to distance learning (Bacher-Hicks, Goodman, and Mulhern 2021).

Using a mixed methods design, three questions explore how schools' catchment area characteristics and students' HLEs shaped the engagement of second-level students in Ireland during the 2020 school closures.

- How did the first school closures impact on student attendance and participation?
- What role did local area characteristics and home environment play in shaping engagement?
- What lessons can be learned from this evidence?

Methodology and theoretical perspective

Using a sequential explanatory mixed-method design (Creswell 2003), the analysis of quantitative data is complemented with qualitative analyses (Ivankova, Creswell, and Stick 2006). In May/June 2020 a detailed survey of second level school leaders was undertaken, achieving a nationally representative sample (33% response rate) (see Mohan et al. 2020). This data allows us to examine how school leaders perceived student engagement during the first period of school closures. As such, this study presents a school-level account of the experiences and responses of students, their families and schools at this moment. Respondents reported on the impact of the closures on students' attendance in classes and the engagement of students with learning, with particular consideration of engagement of students in third (Junior Certificate) and sixth (Leaving Certificate) years.

To understand how home resources and environments can influence student participation in remote education and learning, indicators on the availability of high-speed broadband and educational attainment in the catchment areas[1] of schools have been linked to the survey data. Greater availability of high-speed broadband was found to be associated with a reduced likelihood of poorer student engagement (Mac Domhnaill, Mohan, and McCoy forthcoming). In this paper, we examine the influence of educational attainment in the catchment area of schools, as a proxy for the educational level of parents of the student body. Parental education is important since it has been linked to engagement with schooling and child outcomes (Dickson, Gregg, and Robinson 2016; Lundborg, Nilsson, and Rooth 2014). Using Small Area Population Statistics (SAPS) from the 2016 Census (Central Statistics Office 2017), the average proportion of the population within each school's catchment area

with at least degree level education was identified, from which we distinguish where more than one-third of the population had a degree. We note that in the absence of microdata containing accurate information on the educational attainment of parents/guardians in participating schools, our census-based area-level metric provides us with the best available representation; though we also acknowledge that among the many studies which employ area-level socio-economic measures to proxy for individual-level circumstances, the effectiveness of these proxies vary (Diez-Roux et al. 2001; Williamson 2016). One-in-five of our sampled schools were characterised by catchment areas with a 'high' (degree) level of education.

Logistic regression models examined four student outcomes[2]: attendance, engagement (all students), engagement of third years and engagement of sixth years. Other factors were controlled for, including proxied parental education, the logarithm of average household income in the catchment, as well as key school characteristics such as size, gender-mix and DEIS status.[3]

In-depth interviews with ten school leaders selected to represent diverse school settings (see Mohan et al. 2020) provide a richer understanding of how the HLE shaped the experiences of second level students during this time. Thematic analysis of the interviews focused on how inequality among students' HLEs (both within and between schools) compounded existing inequalities.

The subject matter of this paper, the HLE, is considered in the context of social reproduction theory, which has been defined as 'the intergenerational transmission of physical and symbolic property' between generations (Nash 1990, 432), with education recognised as a principal channel of social reproduction (Kurt 2015). We extend the social reproduction framework to consider how it functions in a crisis situation, as families possess different resources with which to respond, cope and support their children in a massively disrupted learning context (Holloway and Pimlott-Wilson 2019; Pfefferbaum et al. 2015). Families with greater educational, cultural and time resources are likely to be better equipped to meet the demands of this transition and continue to engage in what Lareau described as 'concerted cultivation' (Lareau 2003). We suggest that families with more disposable income, in secure employment and able to avail of more flexible working arrangements are better placed to meet the demands of the crisis.

Findings and results

Unequal home learning environments

More than three quarters of school leaders reported school attendance worsened during the closures period. Reduced student engagement across the whole school was reported by 70% of schools, and 65% reported negative effects on engagement for Junior Certificate students and over half reported such among Leaving Certificate students.

The modelling results revealed that the probability of reduced student attendance in the context of distance learning was lower in catchment areas with high levels of education – considered a proxy for parental/guardian education (Table 1). Modelling indicated that overall student engagement was better in catchment areas with higher educational attainment. Moreover, parental education was significantly associated with engagement among Junior Certificate students, though not so for Leaving Certificate students.

Table 1. Odds ratios for negative impact of school closures and distance learning on student outcomes.

	Shutdown has had negative impact on:			
Outcome	Overall student attendance	Overall student engagement	Junior Certificate (third year) student engagement	Leaving Certificate (sixth/final year) student engagement
Catchment area characteristics				
Degree or higher education:				
Less than 33% of residences	[ref.]	[ref.]	[ref.]	[ref.]
More than 33% of residences	0.329**	0.423*	0.398**	0.769
	(0.169)	(0.203)	(0.186)	(0.343)
Log of catchment area average income	6.323	3.268	2.197	3.872
	(7.915)	(3.869)	(2.495)	(3.969)
School structural characteristics				
Gender:				
Mixed	[ref.]	[ref.]	[ref.]	[ref.]
Girls only	0.281***	0.438*	0.437*	0.690
	(0.126)	(0.190)	(0.190)	(0.294)
Boys only	0.687	0.585	0.565	1.398
	(0.357)	(0.266)	(0.247)	(0.614)
Size:				
Small (24–350 students)	[ref.]	[ref.]	[ref.]	[ref.]
Medium (358–610 students)	1.226	1.295	1.596	1.248
	(0.515)	(0.498)	(0.620)	(0.465)
Large (616–1,538 students)	1.644	1.235	1.330	1.598
	(0.788)	(0.525)	(0.511)	(0.614)
In DEIS programme	2.516*	2.314**	2.096*	3.632***
	(1.222)	(0.948)	(0.796)	(1.386)
N	206	206	206	206

Note: *** denotes statistical significance at 1% level, ** 5% level, * 10% level.
Robust standard errors in parentheses.

Within the qualitative evidence, two themes were identified which elaborate on how different HLEs shaped students' capacity to engage: Family and Home Circumstances and Divergence from School Environment.

Family and Home Circumstances

Where the classroom presents a (roughly) equal learning environment for all students, the HLE was characterised by the largely unique experience of every household. Families had differential access to suitable devices and broadband, and varying

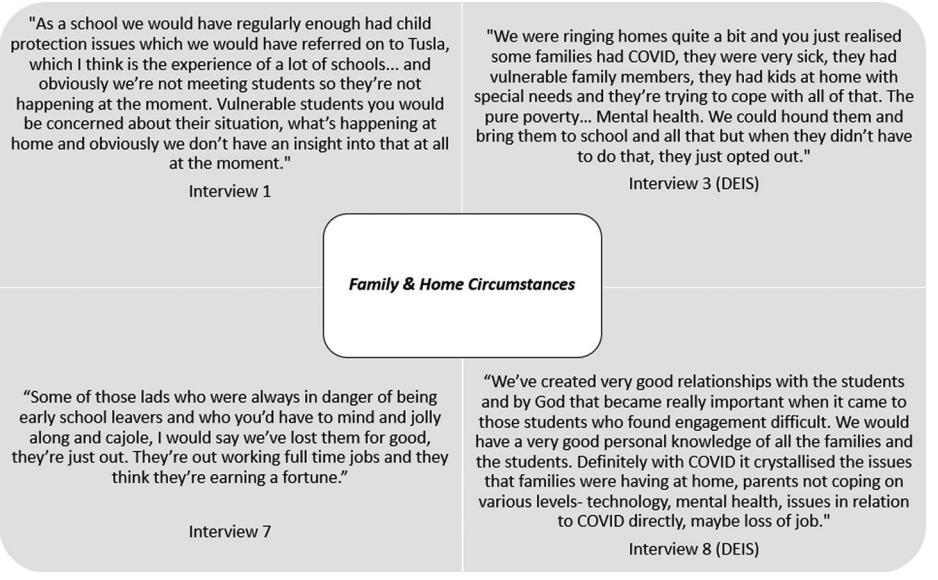

Figure 1. Qualitative evidence concerning Family and Home Circumstances.

degrees of appropriate space shared between different numbers of children and, where they were working from home, parents as well.

Acute and chronic stresses facing families also impacted on student engagement, shown in Figure 1. Interviewees from DEIS schools particularly highlighted financial and personal difficulties encountered by parents/guardians, outlining how this reduced families' capacity to support students. The regression results in Table 1 suggest that, for Leaving Certificate students, DEIS status significantly increased the likelihood of poorer engagement. Parental support became even more important in the absence of normal school structures to encourage or enforce student attendance and engagement. The long-term benefits of remaining engaged became more intangible for those struggling from day to day.

The *Growing Up in Ireland* special report on participant's experiences during the lockdown corroborate these findings, showing that students from socioeconomically disadvantaged backgrounds were more likely to have inadequate working space, reside in a stressed house and less likely to have parents present to motivate them (Murray et al. 2021). Along with issues around access to suitable devices and an adequate internet connection, it was more difficult for disadvantaged students to engage with distance learning. The second theme explores how remote learning was less effective for many students even when they did engage.

Divergence from School Environment

Irish educational policy has focused on providing additional support for students from socioeconomically disadvantaged backgrounds and students with special educational needs (SEN), and achieved substantial improvements in outcomes through evidence-based interventions and dedicated funding (Smyth, McCoy, and Kingston 2015). Key to these developments has been the idea that an equal learning

environment within the classroom is one which meets the needs of all students equally rather than one which gives an exactly equivalent experience to all students. Many of these efforts have centred on creating a positive school environment, delivering targeted supports inside and outside the classroom and differentiating teaching according to students' needs. The gap between vulnerable students' school and home environments was therefore made even more pronounced by the fact that many of these supports could not be provided effectively, if at all, through distance education.

As described in Figure 2, school leaders saw aspects of the school learning environment which did not translate to the HLE as more important to the attendance and engagement of at-risk students. Chief among these was the social aspect of school, and several interviewees suggested that for less academic students it was these peer and teacher relationships which kept students coming to school. As students with SEN and students from socioeconomically disadvantaged backgrounds are more likely to struggle academically (Smyth, McCoy, and Kingston 2015), this divergence was particularly impactful. Almost ninety percent of school leaders identified SEN students as the most impacted group (Mohan et al. 2020). Regression analysis of the relationship between SEN student engagement and catchment area education did not demonstrate a significant association (available from authors); suggesting that students with SEN of all backgrounds were impacted. Students with SEN, however, are disproportionately drawn from socioeconomically disadvantaged backgrounds (McCoy, Banks, and Shevlin 2016). As well as disadvantaged students appearing more likely to disengage, where an equal level of disengagement across all students is experienced, this is likely to be more detrimental for disadvantaged students than for more advantaged peers. School leaders were afraid that this divergence may prove difficult or impossible to overcome, a fear supported by research on academic slippage over school holidays and unplanned interruptions to regular schooling (Kuhfeld et al. 2020).

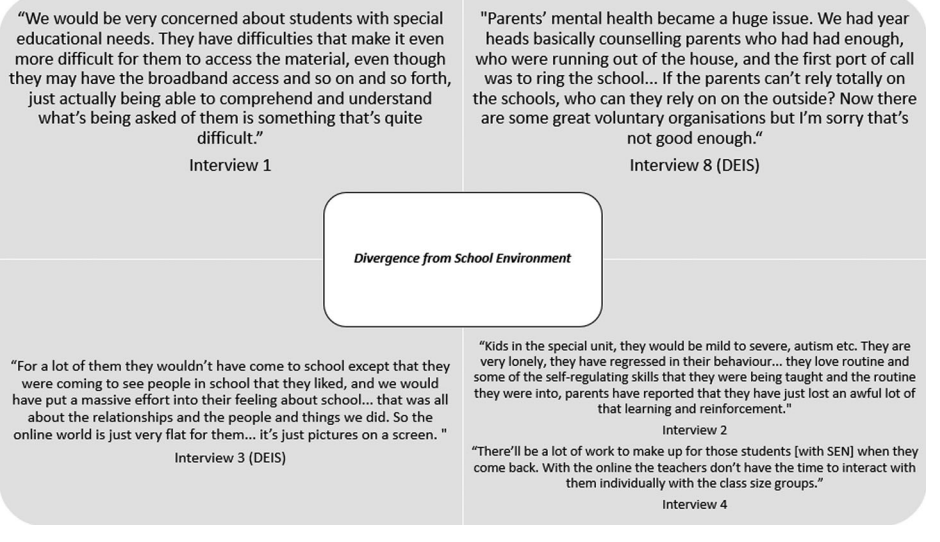

Figure 2. Qualitative evidence concerning Divergence from School Environment.

The impact of the loss of the school environment appears to have been stronger among younger students. The qualitative evidence suggested that younger students were less influenced by the spectre of state examinations, with many third-year students recognising early that the Junior Certificate exams were unlikely to take place and disengaged from learning in part or in full as a result. Table 1 shows that parental education affected student engagement at the Junior Certificate level, though not at Leaving Certificate. These varying associations might reflect differences in parental involvement in their children's education at different stages: students in their final year are more likely to be independent learners with greater autonomy than younger students, where parental influence may have a greater bearing on their educational participation. This is important since evidence suggests that Junior Cycle experiences have a profound impact on trajectories through Senior Cycle and into post-school education and training (McCoy et al. 2014).

Overall, the barriers to engagement discussed above intersected to make it more cumbersome and less rewarding to engage for vulnerable students, with the result that differing HLEs generally compounded pre-existing disadvantage, as well as throwing up new issues, including broadband access for a wide cross-section of rural students.

Discussion and conclusion

As schools reopen for all students, the importance of these findings mainly lies in what they mean for students' return to the classroom. Student engagement and attendance during the lockdown existed along a spectrum, and each of the factors above influenced student's capacity and motivation to attend, but no single factor determined it completely. Along this spectrum, it is clear that vulnerable students' HLEs were generally less conducive to engaging with remote education. Considering this through a social reproduction lens, the closure of school buildings has most likely strengthened the transmission of privilege through the different resources available to different families to respond to the crisis. Unless schools can make up for the disruption, differential losses of learning during the distance learning periods are expected to ripple through students' educational trajectories and into their later life.

What schools can do to make up for the COVID-19 education interruption is the most important question arising from this study. The evidence presented suggests that targeted supports within the classroom environment and efforts to make school a place where students want to be are vital in reducing the impact of educational disadvantage. Continuing and expanding these efforts should be central, both in the form of intensive short-term responses and more sustainable long-term developments. Discussions of meritocracy can often emphasise student effort while disregarding systemic factors, avoiding the question of what equal opportunity means in the context of drastically unequal circumstances. Future policies need to address both enduring and new forms of inequality to promote learning for all students.

Notes

1. Each school's catchment area was marked as a circular buffer, with buffer distance determined by the extent to which the surrounding area was urban, ranging from 8km for schools located in highly urban areas to 24 km for rural schools. These distances were

assigned based on data from the *National Household Travel Survey* 2017 and *Growing Up in Ireland*, described in Mohan et al. (2020), Appendix.
2. School leaders were asked to rate 'student attendance' and 'student engagement' during the school closures compared to in-school learning. Response options included 'much better', 'better', 'similar', 'worse', 'much worse' – where 'much worse' and 'worse' was coded 1 for the outcome variable 'worse' student attendance/engagement, zero otherwise. The wording of question relating to student engagement of exam year students (Junior and Leaving Certificate) was slightly different. The question posed ran as, what effect has the COVID-19 shutdown had on Junior/Leaving Certificate students in your school? With response options: 'Very positive', 'positive', 'neither negative nor positive', 'negative', 'very negative' – where worse engagement by exam years =1 if 'very negative' or 'negative', zero otherwise.
3. Delivering Equality of Opportunity in Schools – a national programme aimed at addressing the educational needs of students from disadvantaged communities in Ireland.

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Disclosure statement

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Notes on contributors

Dr Gretta Mohan is a Research Officer at the Economic and Social Research Institute in Ireland and Assistant Professor at Trinity College Dublin. Her research interests include the economic and social impacts of electronic communications and digital technologies, including educational outcomes to inform public policy making.

Dr Eamonn Carroll is a Research Assistant at the Economic and Social Research Institute in Ireland. His research interests include educational inequality, bio-ecological approaches to educational research and inclusive education.

Prof Selina McCoy is an Associate Research Professor at the Economic and Social Research Institute in Ireland and Professor at Trinity College Dublin. Her research has focused on educational inequality, inclusion and digital technologies in teaching and learning.

Ciarán Mac Domhnaill is a PhD student in the School of Economics and Finance, University of St Andrews. Environment, health, education, and energy economics are among his research interests.

Dr Georgiana Mihut is a Postdoctoral Research Fellow at the Economic and Social Research Institute, Ireland. Her research interests include higher education, inequality, and inclusion.

ORCID

Gretta Mohan http://orcid.org/0000-0002-1525-0841

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