



A flexible model for exposing and mitigating the hidden curriculum in the transition to higher education

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Abstract

The hidden curriculum is the broad set of values, norms and practices in education that are rarely explicitly taught but may be tacitly known. This is particularly acute in the transition from school to university, but also when entering higher education on alternative routes: first-year undergraduate students do not all share the same prior insights into or expectations of university learning, potentially exacerbating systemic inequalities. We present a flexible framework for uncovering and addressing the hidden curriculum in the transition to university, with particular focus on direct entry from secondary school. The framework is designed to be applied in subject-specific contexts to address specific needs and involves three key stages of (i) planning, (ii) investigation, and (iii) analysis and targeting of the hidden curriculum. The planning stage engages current students as co-researchers to identify key areas of the context-specific hidden curriculum and design thematic focus groups. At the investigation stage, student co-researchers lead focus groups to identify key elements of the hidden curriculum, feeding into quantitative data collection reaching a wider sample of the population. Finally, the analysis and targeting stage involves synthesising and interpreting results from data collection to create resources that reveal the hidden curriculum to incoming students early on in their studies. We demonstrate an application of this framework to Linguistics at Newcastle University.

Keywords

hidden curriculum, underrepresented students, diversity, transition, induction

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Introduction

The transition from secondary school to higher education is a key bottleneck for the success of school-leavers entering university: making this transition effectively is an essential factor in whether students do well in higher education. Moreover, students' "capability to navigate change" (Gale & Parker, 2014, p. 7373) affects their likelihood of success even after the transition is complete. The "continuous process of interpretation, negotiation and balancing" (Gregersen et al., 2021, p. 1357) involved in transition requires that students can recognize, make sense of, and adopt values, norms and practices that are often specific to higher education (Holmegaard et al., 2014).

Crucially, these values, norms and practices are not homogenous across the higher education landscape; they may be specific to individual institutions, departments, or subject areas (Hasse, 2000). To complicate matters further, incoming students are regularly expected to navigate profound changes in conventions and behaviours with little support. Awareness of the untaught components of the higher education experience – or 'hidden curriculum' – is increasing. While the hidden curriculum has been tackled in specific subjects (e.g., Lawrence et al., 2018 in medicine; Villanueva et al., 2018 in engineering), we lack, especially in the British context, strategies designed to identify and mitigate effects of the hidden curriculum that can be applied across subjects (see Charity Hudley 2018 for a notable exception in Linguistics in the US context). This is of critical importance since the hidden curriculum systematically affects students from backgrounds traditionally underrepresented in higher education (Álvarez-Rivadulla et al., 2022; Stubbs & Murphy, 2020; Veidemane et al., 2021). In this paper, we outline a structured, student-centred framework for making hidden values, norms, and practices of higher education explicit, with the aim of easing students' direct transition from secondary school to undergraduate studies and enhancing student success and belonging. We pay particular attention to differences between students from traditional and underrepresented backgrounds. In addition to cultural and racial variation, it is worth noting that there are alternative routes into higher education, such as transitions after a gap year or foundation year/college courses, attending university as a mature student or with an international background. These routes are less represented in the local context at the School of English Literature, Language and Linguistics at Newcastle University, therefore our model focuses on direct transition from secondary to higher education, but we included students that had taken alternative routes in our data collection.

We begin with an overview of the hidden curriculum, a brief explanation of how it applies to Linguistics, a summary of the problem, and a broad description of our collaborative staff-student framework. In the following, we detail each step of the framework, including its aims and how the model was applied in the specific context of undergraduate teaching in Linguistics at Newcastle University. We continue with a critical reflection on the insights and lessons learned, and then conclude.

The hidden curriculum

The official curriculum is the explicit instructional, cognitive, and affective outcomes of education. In contrast, the hidden curriculum is the existence of institutional – and often subject-specific – values, norms and practices that are not explicitly taught or communicated but that students are nonetheless expected to know (Alsubaie, 2015; Giroux, 1978; Giroux & Penna, 1979; Jackson, 1968). In theory, institutional values are made explicit in mission statements and similar materials; but these are not specifically

student-facing and leave substantial gaps in explaining institutional culture (Tierney & Lanford, 2018). Therefore, not only the existence and location of key information are part of the hidden curriculum, but how information is presented may make it fundamentally inaccessible.

As others before us have noted (e.g., Hubbard et al., 2020; Koutsouris et al., 2021), seasoned educators internalise the rules of the game. With time, educators forget details of their own experience of transitioning to university, and they may not be aware of how their own backgrounds minimized or exacerbated the effects of hidden expectations. Moreover, the systemic context of higher education, secondary education and global politics evolves rapidly.

Exposing the hidden curriculum to incoming students benefits both students and institutions. To enable university students to succeed must not assume that students will adopt conventions that may not have been taught during their earlier studies, such as referencing and academic writing, or that they will master behaviours that were not required of them, such as independent study, note-taking or individual goal setting (Hubbard et al., 2020, p. 60). Exposing the hidden curriculum is also important for students' self-conception (Snyder, 1971). If essential norms and conventions are only accessible through family knowledge and other social networks, we risk alienating students from underrepresented groups who lack this 'social capital' (Bourdieu, 1986). Mishra (2020), for example, points out that parents or guardians with higher education qualifications are relatively familiar with, and therefore able to pass on, the hidden values, norms, and practices of higher education, including soft skills such as knowing what and who can be questioned. This can intensify a lack of sense of belonging in students without familial access to such information (Giroux & Penna, 1979). In turn, this may affect students' self-worth and self-esteem (Snyder, 1971), as well as their engagement and attendance. As Reay (2016, p. 118) puts it, students can feel excluded from within.

As the hidden curriculum is unintended – it is not a set of unspoken rules hidden with malice (Koutsouris et al., 2021) – we should aim for clear communication thereof to try and enhance academic preparedness and social experience of higher education as well as student retention and attainment (Hubbard et al., 2020; Lowe & Cook, 2003; Meehan & Howells 2019). Retention and achievement gaps between multi- and first-generation students, students from high and low socio-economic backgrounds, or those without and with migration backgrounds, remain widespread (Ebert & Heublein, 2017; Mishra, 2020; Müller & Schneider, 2013). Key objectives to expand access to higher education to more socially and economically diverse student populations (Mishra, 2020; Osborne, 2003) increase for both students and institutions the urgency of making explicit the norms, values and practices that lead to success.

The hidden curriculum in Linguistics

Subject-specific contexts, too, can have uniquely negative outcomes associated with the hidden curriculum. A key tenet of Linguistics is that all language use is valid and of scholarly interest. Yet the Linguistics curriculum tends to revolve around hearing, native English-speaking, monolingual, neurotypical language users: spoken languages are routinely privileged over signed languages (Sanders et al., 2020); English is often given outsized status (Matsuda & Duran, 2013); data fragments may reinforce majority cultures and stereotypes (Kotek et al., 2020); and neurotypical linguistic data interpretations are

usually centred (Anderson et al., 2022, Ch. 8.6). It follows that revealing the hidden curriculum in Linguistics involves accommodating diverse language backgrounds and de-centre prestige language varieties. This illustrates the two-fold challenge faced by educators: uncovering both the institutional and the subject-specific hidden curricula and consider how they interact.

Regional differences in UK higher education

The hidden curriculum takes a different shape across institutions and subject areas. Since education is devolved in the UK, different circumstances hold across the four nations. As most of our UK undergraduate students come from England and Wales, we briefly outline exposure to Linguistics in these nations here. In England and Wales, students specialise at age 16 in three (occasionally four) subjects they are examined in at age 18. Unlike many other subjects (e.g., English Literature, History), Linguistics is not offered as a specialism. The closest equivalent is English Language, which is not universally available from ages 16-18 and does not typically use the theoretical or methodological approaches employed in undergraduate university study of Linguistics. Modern Languages degrees also do not teach linguistics directly, though students may gain some knowledge of morphology indirectly through learning about tense, case and so on in their language of study. In any case, the take up of modern languages post-14 in schools in England is in severe decline (British Academy, 2023; British Council, 2023).¹ In terms of alternative routes to higher education, we are not aware of foundation courses or diplomas in Linguistics, whether applied or theoretical. Students may therefore enter with very different levels of familiarity with linguistic theory and methods.

There are further differences of how the educational landscape for Linguistics at Newcastle University differs from that in other disciplines or institutions in other countries. First, the costs of undergraduate education in England have increased drastically because tuition fees were raised from £3000 to £9250 per year since 2010. While this is true for other English universities, this has had a more significant impact in our local context, as the North East of England is one of the most deprived regions of the UK (ONS, 2021). Moreover, educators in the UK may have experienced their own education elsewhere: over 30% of academic staff are international (UUK, 2022). Finally, Linguistics deals with issues such as technology, (de)colonisation, race, gender, and identity, which have undergone significant attitude changes in recent decades and exhibit marked generational differences (Cormick, 2019; Sawyer & Gampa, 2018; Smith, 2020; Taylor & Scott, 2018).

A methodological framework for exposing the hidden curriculum

The problems outlined above require a structured, but flexible, framework that involves and empowers students to expose the hidden curriculum at both institutional and subject-specific levels. We propose a detailed methodological framework for exposing the hidden curriculum. Rather than focusing on general trends of transition into higher education (e.g., Koutsouris et al., 2021) or on a particular subject (e.g., Torralba et al., 2020 for medicine), we provide a framework that can target the needs of different subjects and institutional contexts. We propose to start with a structured assessment of the needs of

¹ The same does not apply straightforwardly to Wales, where a qualification in Welsh is typically pursued to at least age 16.

students, crucially centring them from the outset both as co-researchers and as the target population for data collection. Our model for identifying elements of the hidden curriculum, and building tools to expose it, uses interrelated qualitative and quantitative explorations of student experiences. A schematic of the framework is presented in Figure 1 consisting of Steps 1 and 2 (Plan), Steps 3 to 5 (Investigate), Steps 4 to 6 (Analyse and Target) and Step 8 (Evaluate). For each Step, we first describe the general approach (Framework), and then detail specific applications of each step to our context at Newcastle University (Application). When possible, we ground the framework on previous literature. If we did not find existing recommendations, we developed our own in discussion with our student co-researchers (see Step 1 for more details).

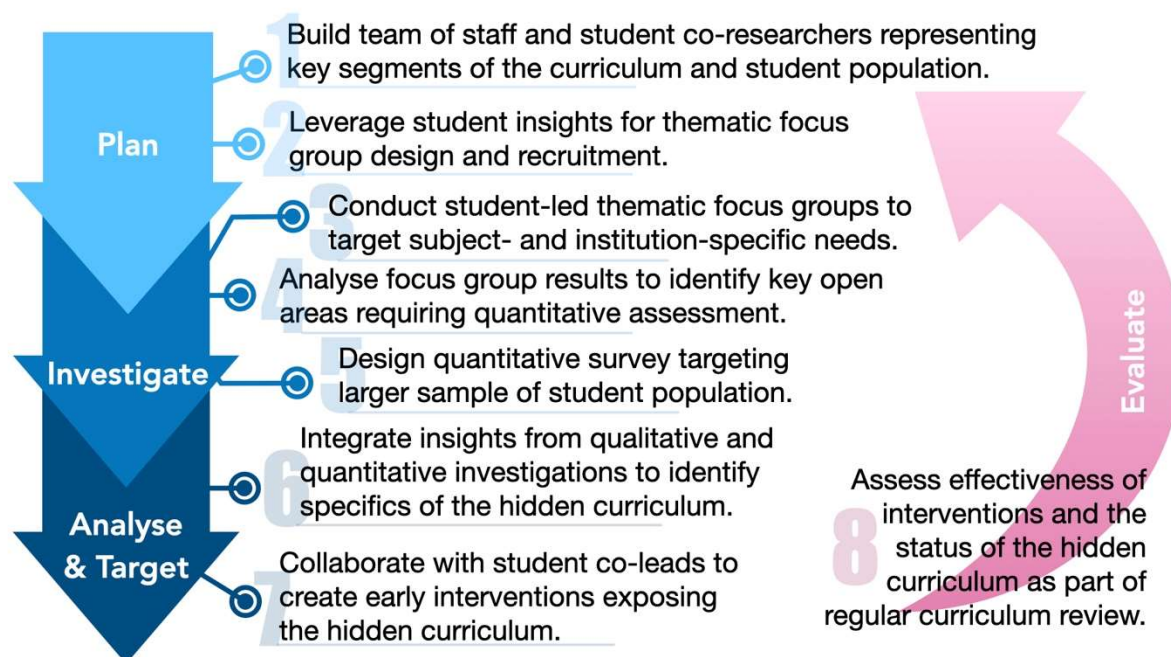


Figure 1. A flexible framework for exposing and addressing the hidden curriculum in subject- and institution-specific context.

In all this, involvement of student co-researchers with recent experience of entering higher education is essential. As educators we set, assess, and amend formal curricula with intent, but we perpetuate hidden curricula and are not well placed to assess its manifestations. Student co-researchers must contribute to identifying themes for data collection; engaging other students in discussion about the hidden curriculum; analysing and interpreting the data; and developing resources for exposing the hidden curriculum. Incoming students may feel more comfortable discussing values, practices, and norms they find opaque with current students than with educators. Student involvement also provides a valuable user perspective and offers more direct access to those affected by the hidden curriculum (Hubbard et al., 2020; Koutsouris et al., 2021).

Plan

Build the research team (Step 1)

Framework

Because educators unintentionally contribute to hidden curricula, the research team should include multiple educators, students, and, ideally, administrative staff. We see benefit in staff having a range of interactions with students over the full duration of their

studies to fully understand both academic and non-academic challenges they face from the start all the way through to the end. For balance, the team should include the same number of student co-researchers as staff. It seems advisable that student co-researchers should be current students in the subject area at the institution where the framework is being applied, at an intermediate or advanced stage in their studies. To bring diverse experiences of the hidden curriculum to the project, both staff and student researchers should, where possible, represent different populations, including underrepresented groups. As is common practice, ethical approval for the project should be obtained from relevant institutional bodies.

Application

Our staff team included three Lecturers (~assistant professors) and one Senior Lecturer (~associate professor) who were involved in teaching all undergraduate and postgraduate years of Linguistics at Newcastle University. All educators had studied both inside and outside the UK at either undergraduate or postgraduate level. All educators were White; two identify as female, one as genderqueer and one as male.

Four student co-researchers were recruited as interns paid in line with the 2021-22 Newcastle University student casual worker pay-scale (£11.88 per hour). Intern positions were advertised widely to all Linguistics students heading into their second or final year of study.² In selecting student co-researchers, the educator team considered years of university attendance (two co-researchers were entering their second year, one their third year, and one their final year), nationality (three co-researchers from the UK, one from outside the UK), as well as gender and racial diversity (two White, one South Asian, one East Asian; two female, one male, and one genderqueer). The University Research Ethics committee approved our plans for conducting focus groups and surveys as low risk.³ Almost all team meetings were held on Zoom.

Leverage student co-researchers' insights for thematic focus group design (Step 2)

Framework

The research team should collaboratively identify key areas of the hidden curriculum in the specific context where the framework is being applied (see below for examples, and Álvarez-Rivadulla et al., 2022; Stubbs & Murphy, 2020, for areas of particular relevance for students from underrepresented backgrounds). The team might add, remove, or change these areas as the project progresses or the framework is iterated. However, having a finite set of three to five initial themes is important for structuring focus group design. Using these themes, staff researchers should facilitate open discussion with and among student co-researchers to identify specific instances of the hidden curriculum they may have experienced or observed. Using these examples, the research team should then identify five to ten focus group questions per thematic area.

Application

Before the initial Zoom meeting with student co-researchers, staff identified four likely themes from the literature (Álvarez-Rivadulla et al., 2022; Stubbs & Murphy, 2020): ethics

² If students combine linguistics with a modern language, the third year of their four-year course is spent abroad. Final year can therefore constitute the 3rd or 4th year of a student's overall programme.

³ Ref: 14659/2020.

and inclusion; academic skills; degree-specific issues for Linguistics; and university-wide norms and procedures. At the first meeting, staff contextualised these themes and invited feedback from student co-researchers. Some necessary flexibility in these themes emerged with e.g., research ethics being perceived as less relevant for students with more theoretical interest in linguistics (i.e. those who were less likely to collect data from human subjects during their studies).

The initial themes were influenced by the contemporary geopolitical situation. Our implementation took place in the academic year 2021-22 when most teaching had returned to in-person format after long periods of online-only teaching due to COVID-19 prevention measures. The pandemic affected all students involved in this project. Given students' potential experiences of social isolation during lockdowns and online teaching (see, inter alia, Di Malta et al., 2022), we expected community-building to be a key challenge for most students and included this in our questions. Again, this context underscores the flexibility built into the framework: focus groups can target the needs of a particular time, place, and subject.

Student co-researchers used Google Jamboards (<https://jamboard.google.com>) for documenting specific hidden curriculum issues and experiences relevant to each theme, and for sharing these with the staff team members. Student co-researchers then utilised Kinzie (2016) as a model to develop 6-8 open-ended focus group questions for each theme (see online supplementary material⁴ for the full set of questions). They also participated in one roleplay of a focus group session with staff team members to learn about different roles and approaches.

Investigating

Recruit for and conduct focus groups (Step 3)

Framework

Asymmetries in knowledge between students from different communities are present from the first weeks of teaching, and if not addressed, will deepen from the start (Gregersen et al., 2021). Therefore, focus group participants should include first-year students wherever possible. The size and number of focus groups should depend on the general size of target populations as well as the size of research teams. Two to three focus groups have been found to be sufficient to reveal 80-90% of relevant data (Guest et al., 2017). Although some suggest the ideal group size to be in double digits (Krueger, 2014), we recommend numbers sensitive to individual institutional contexts to ensure focus group heterogeneity and avoid recruiting groups of like-minded friends (Freeman, 2006). In smaller programmes, a minimum of three to four students per focus group should be sufficient.

Staff team members may be involved in publicising the opportunity for focus group participation, but recruitment of, communication with, and organisation of participants should be entirely student co-researcher led. First, it encourages ownership and engagement by the student team members (Hanauer et al., 2012). Second, it benefits project recruitment because student co-researchers have more direct access to their peers (Sandover et al., 2012; Walkington, 2017; cited in Koutsouris et al., 2021). Third, by including student co-researchers' perspectives throughout, we can moderate staff members' unconscious contribution(s) to the hidden curriculum. Finally, this recruitment

⁴ Supplemental online material: <https://lead-ncl.gitbook.io/hidden-curriculum>

approach creates an ethically necessary ‘curtain’ between staff members and any student focus group participants. Focus groups must be a forum where participants feel comfortable discussing sensitive and challenging aspects of their studies in the absence of those who may assess them.

Focus group duration needs to be tailored to project requirements and be an hour at minimum to yield sufficient data (Stewart & Shamdasani, 1990). Each focus group should have two student team members present: a facilitator responsible for leading discussions, directing them into follow-up questions and keeping them on track; and a note-taker responsible for using templates of pre-determined questions to take detailed notes of open discussions.

Application

Participants were recruited from the 2021-22 cohort of first- and second-year Linguistics students at Newcastle University via email from student co-researchers, in-class announcements by educators and student co-researchers, word-of-mouth, and posters in relevant university buildings. Two focus groups were conducted with three and four student participants in each. All participants gave informed written consent to participating in focus groups, and student co-researchers stored consent forms securely. Participants were made aware that they could withdraw consent at any point, request that their comments be removed from the meeting notes and leave the focus group. Focus groups met in neutral campus environments. Participants were provided with free lunch.

Each focus group covered all four themes to get broad sets of relevant perspectives on each. They each lasted 60 minutes and were led by a student facilitator and note-taker. No audio-recordings were taken to promote comfort and feelings of safety. Discussions were preceded by short rounds of introductions, and brief explanations of the purpose of the project and the procedure of typical focus groups. The groups ended with debriefs and opportunities for further comments or questions.

Analyse focus group data to identify open areas for quantitative assessment (Step 4)

Framework

Student co-researchers should meet independently after focus groups to create summaries of responses, structured to match themes identified at the design stage. Before sharing summaries, student co-researchers must remove any comments or information that could identify individual focus group participants. Summaries should then be presented to the whole project team as input for quantitative survey design.

Application

Ethics and inclusion

The discussions revealed that the concept ‘ethics’ has a range of applications, of which only one is intuitive to students. Students mainly seem to consider ethics and inclusion as issues related to human subjects’ research, rather than broader issues in creating ethical and inclusive learning cultures, although the same principles underpin both. We had anticipated more awareness of the relevance of ethics and inclusivity to teaching and the broader university experiences. In terms of community inclusion and diversity, individual participants felt that the university did not foster a community for mature students (i.e., students who matriculate after age 21), and that there was a perceived

social separation between UK and international students. There was a perception that the lack of racial diversity among the predominantly White teaching staff led to lack of cultural and ethnic diversity in taught content, which the participants linked to research-led teaching. While some students were concerned about lack of language diversity in the degrees, citing a perceived bias towards Indo-European languages in course materials, others identified specific modules that covered a range of languages and dialects. Finally, some students also perceived a lack of LGBTQIA+ content in the curriculum.

Academic skills

Students reported feeling underprepared and disoriented when assessed on their essay writing, even though this a common form of assessment across all years in Linguistics at Newcastle University. Several participants claimed that their essay writing praxis from secondary education did not help with essay writing at university. While educators seemed to have clear expectations of what essays should look like, students were not clear on how to recognise and adopt relevant models (see Bartimonte-Aufflick et al., 2016; Denny, 2021, on educator expectations). Students specifically mentioned synthesising and correctly citing literature as important skills, but few felt confident in doing so despite explicit instruction.

Discrepancies between educator expectation and student experience were also present in other academic skills. Focus group participants mentioned that they struggled with textbook density and academic register in their reading, and that educators often expect full text understanding. Reading academic journals was also found to be difficult, and many students were surprised to encounter this genre in their studies. One participant also revealed they were unclear what 'independent study' entailed – a term used frequently in student-facing materials.

Degree programme-specific issues.

Most participants reported feeling unprepared for university study in terms of the subject content. While some considered their secondary school background helpful in setting expectations, students generally agreed that university-level linguistics was more 'technical' or 'science-based' than expected. Students reported some difficulty in accessing online resources, and were surprised to learn new, subject-specialist software. Previous knowledge from advanced secondary school studies seemed relevant, but one participant remarked that they found it difficult to apply this knowledge in the university context. Participants noted that reading academic sources was important at university than it was at school, and that they found these sources difficult to access or find.

University-wide norms and procedures

Most focus group participants found school-university changes in student-staff interaction to be greater than expected. Participants were confident in contacting educators on a one-to-one basis, but they did not feel sufficiently confident to make appointments or attend scheduled drop-in consultation hours.⁵ However, students were well informed about other support offerings such as peer mentors, student mental health support, and the school-level student-staff committee. Many students had unclear expectations about lectures and seminars (the general UK term for small group teaching

⁵ Consultation hours are advertised on the School website, in staff email signatures, on staff office doors and in module materials on the learning management system (LMS). Staff may offer both in-person and online appointments during this time; typically this is advertised via the email signatures and module materials on the LMS.

sessions) when they started their degree, specifically relating to: behaviour and participation in lectures and seminars, relation between lectures and seminars, and preparation for seminars.

The university administrative structure was a stressor for students. At Newcastle University, Linguistics sits within a broader academic unit, the School of English Literature, Language and Linguistics, where Literature students far outnumber Linguistics students. Communications sent via the school were often perceived to centre Literature students, with Linguistics students left uncertain about some aspects of their programme. In general, student-facing communications were flagged as another challenge due to specifics of the IT system, insecurities about how to address staff, and issues of community.

Design the quantitative survey (Step 5)

Framework

Focus groups identify concrete ways in which students struggle with hidden values, practices and norms in a specific subject and institution. However, the previous literature shows that students from underrepresented backgrounds may be affected in different ways and to different extents by the hidden curriculum than the wider student body. This requires more in-depth investigation than is possible in focus groups.

The staff-student team must identify specific areas where quantitative data can help establish the representativeness of qualitative focus group findings. The aim should be a brief questionnaire in a format allowing analysis of issues across broader groups. Some questions may also be targeted at developing solutions to problems identified in focus groups.

Application

Methods

Our survey contained 14 questions (see online supplementary material) to collect anonymous responses from current Linguistics students. Three questions collected biographical data; four questions sought detail on academic skills and assessment, three on communication and community, and another three on ethics and inclusion. There was also a free text box for additional comments. The questionnaire was distributed using Microsoft Forms and took an average of 8:39 minutes to complete. Participants were recruited from all undergraduate years by email and in-class announcements. Participation was voluntary. Participating students gave informed consent to the anonymised collection of their data.

The questionnaire was completed by 45 students (overall response rate: 18%) – eight were from year 1 (response rate: 8.7%), 23 from year 2 (28%), and 14 from final year (18%; cohorts have on average of 80 students). We also recorded participants' specific degree programmes.⁶ Seventeen participants studied Linguistics, 11 studied English Language, another 11 studied Linguistics in combination with a modern language, and six studied a different joint honours programme. Twelve participants were members of

⁶ Linguistics staff contribute to teaching on nine different degree programmes at Newcastle University. Seven of these are administered within the School of English Language, Literature and Linguistics (SELLL). One is administered in the School of Modern Languages and one by a unit called Combined Honours. Compulsory modules vary across programmes.

underrepresented groups (two international students, six students with disabilities, and four students admitted through a contextualised offer scheme⁷).

Results

Key skills, such as essay writing, were identified as points of confusion in focus groups. We therefore asked students to provide confidence ratings in various academic skills. We coded responses of 'Very Confident' as 3, 'Fairly Confident' as 2, and 'Not confident' as 1, recording but not coding the additional options 'I don't do this' and 'I don't know what this is'. Some respondents selected these additional options for the following skills: collaborative work, detail (i.e., in-depth) reading, literature search, overview (i.e., cursory or skim) reading, oral presentations. Such responses were overwhelmingly from year 2 students. These skills are notably uncommon in secondary education or may have been harder to practice in online teaching during COVID-19 restrictions. One student provided no response for referencing. Figure 2 shows data which excludes these 13 responses. Purple circles (on the left of each pair) indicate responses from underrepresented students; blue circles (on the right) indicate responses from traditional students. Separating responses for traditional vs. underrepresented students help us assess whether the hidden curriculum is more acute in some student populations. Underrepresented students are usually affected more greatly by a hidden curriculum than students from traditional backgrounds. This is not to advocate targeted interventions – improvements in accessibility should be accessible to all – but to add nuance to data interpretation. The size of each circle represents the proportion of responses for that confidence level, category, and type of student, normalised by the total number of responses for the category and type of student.⁸ Despite a larger overall proportion of traditional students in our sample, this allows us to see where the 'weight' lies in terms of confidence for each skill and student type.

⁷ Contextualised offer schemes are a route to admission for applicants with lower grades than are typically needed for admission to our degrees at Newcastle University, on the condition that they are from geographical areas with historically low participation in higher education or face barriers to or are traditionally underrepresented in higher education.

⁸ Because our sample included more traditional (33) than underrepresented students (11), each circle is sized according to the total number of circles, e.g., six underrepresented students reported they were 'fairly confident' in detail reading; $6/11=0.55$, indicating that just over half of underrepresented students were fairly confident in detail reading. While more individual traditional students reported being fairly confident in detail reading (20/33), the normalised proportion is similar (0.61), yielding similar weight to this confidence level in both groups. This normalisation is replaced by side-by-side visualisation of proportion and frequencies in Figure 4.

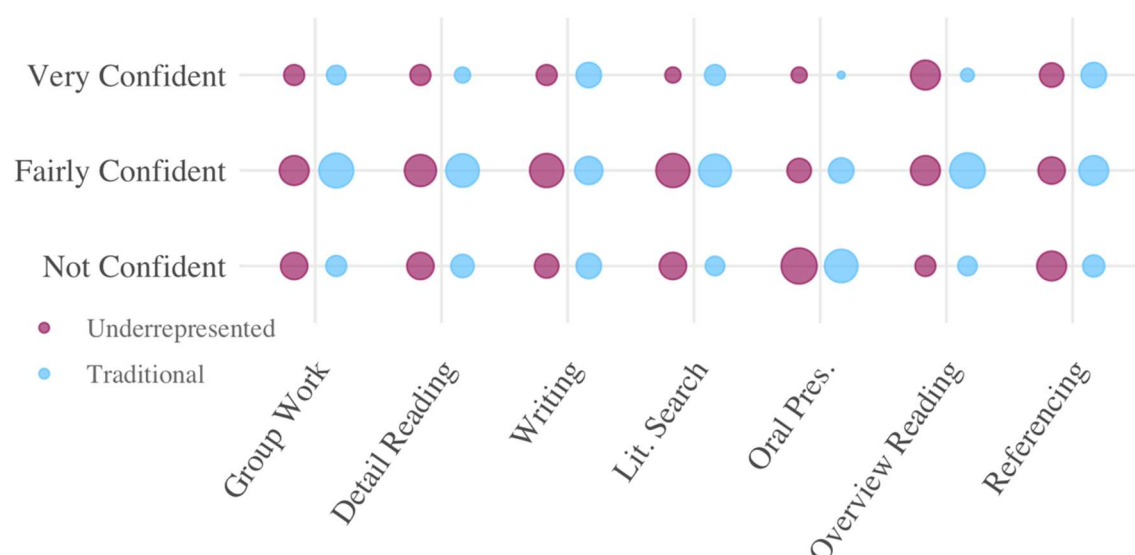


Figure 2. Self-reported confidence on a variety of academic skills, with traditional students ($n=33$) in blue and underrepresented students ($n=12$) in purple (normalised for easier comparison; circle size is not proportional to raw frequencies (see also Footnote 6).

Many traditional students feel fairly confident (23/33; 70%)⁹ in overview reading, while underrepresented students more often rated to feel very confident in this skill (5/11; 45% vs. only 1/33; 3% of traditional students). This trend is reversed for writing: traditional students are more likely to feel very confident (10/33; 30% vs. 2/11; 18%) for underrepresented students), while rates of 'fairly confident' are higher in underrepresented students (7/11; 63%) vs 13/33; 39% for traditional students). Underrepresented students were proportionally less confident in searching for literature (4/11; 36%) and group work (4/11; 36%) than traditional students (literature: 5/33; 15%; group work: 6/33; 18%), and all students lacked confidence in oral presentations (underrepresented: 7/11; 64%; traditional: 20/33; 60%).

We also asked participants to rank the same seven academic skills from 'Most important for success in my degree' (rank 1) to 'Least important for success in my degree' (rank 7). Figure 3 shows a heatmap of these rankings for (a) traditional and (b) underrepresented students. Here, colour intensity represents the proportion (percentage) of rankings in each category. For example, about 67% of traditional students ranked writing as the most important skill.

⁹ All percentages reported in text for questions 5 and 6 are rounded to the nearest whole percentage. Visualisations in Figures 2-3 are based on unrounded proportions scaled between 0-1.

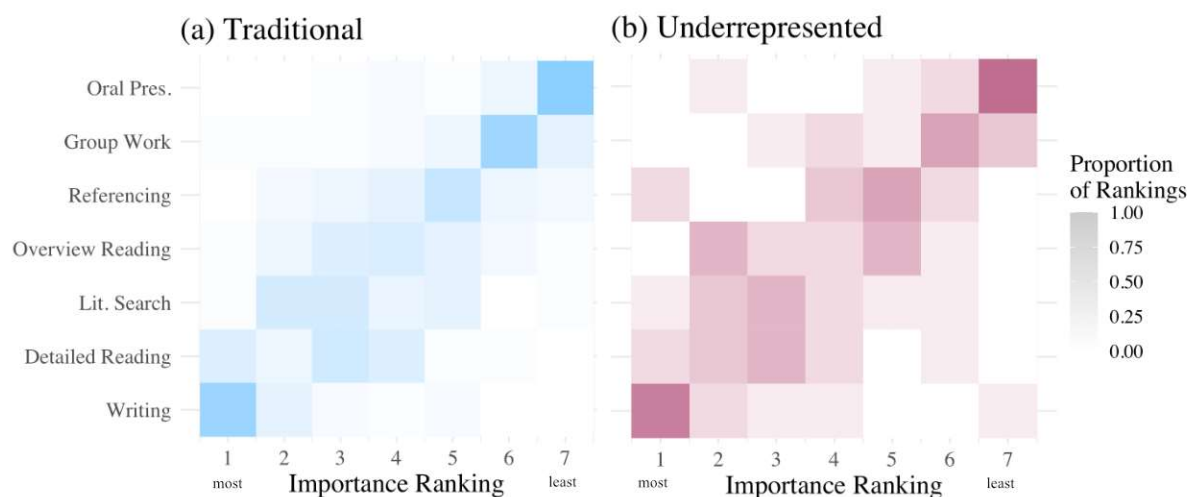


Figure 3. Rankings of the importance of various academic skills ‘to success in the degree’, by traditional (33) and underrepresented (12) students.

Skills like writing, detail reading, and literature search were ranked highly across groups, although one underrepresented student ranked writing last. There was more variation in underrepresented students’ rankings. Underrepresented students proportionally ranked referencing and oral presentations more often as important skills than traditional students and assigned slightly more importance to group work.

Furthermore, we asked students to identify where they looked to find and read academic literature independently; from seven resources, students could choose all those that they have found helpful. Figure 4 shows the count (a) and proportion (b) of resources selected for traditional and underrepresented students. Respondents could select multiple resources.

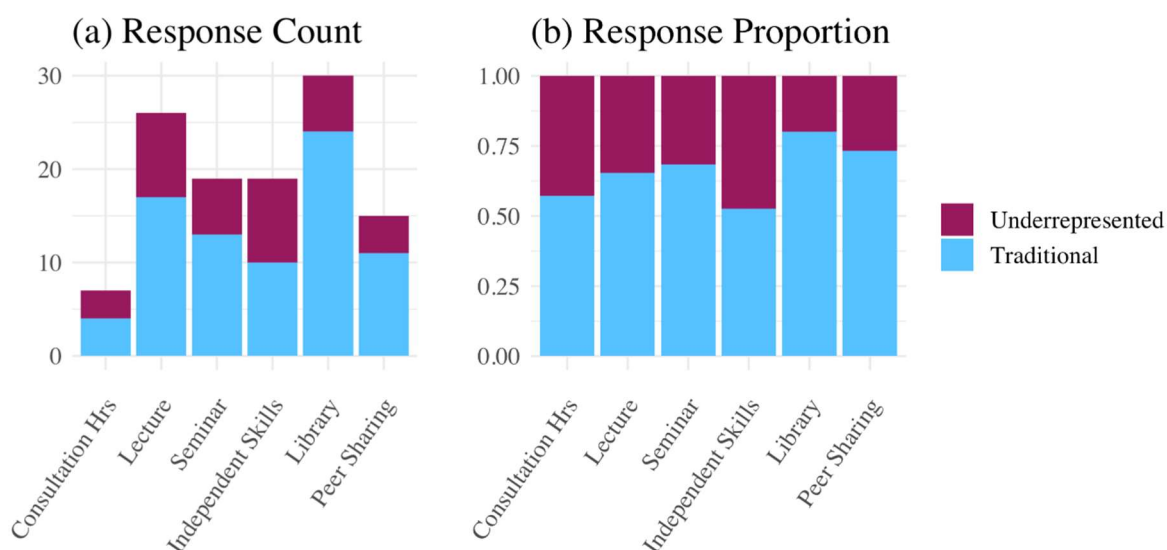


Figure 4. Traditional (33) and underrepresented (12) students’ self-report of resources they use to find literature, in terms of relative counts (a) and proportions of responses (b).

Among traditional students, library resources and focused lectures were regarded as most helpful; among underrepresented students, focused lectures and independent

research on study skills were considered more valuable. Students from all backgrounds showed low engagement with optional consultation/office hours. Although peer sharing was relatively low overall, this route was more often rated as useful by traditional students.

Finally, to examine self-organisation around assessments, participants were asked to choose the strategies that ‘helped them best prepare’ for the most common types of assessments in their studies (see Figure 5). Respondents could only choose one strategy for each assessment type (essays, multiple-choice quizzes, presentations, problem sets where students are asked to analyse examples, poster presentations, or other alternative formats, such as podcasts).

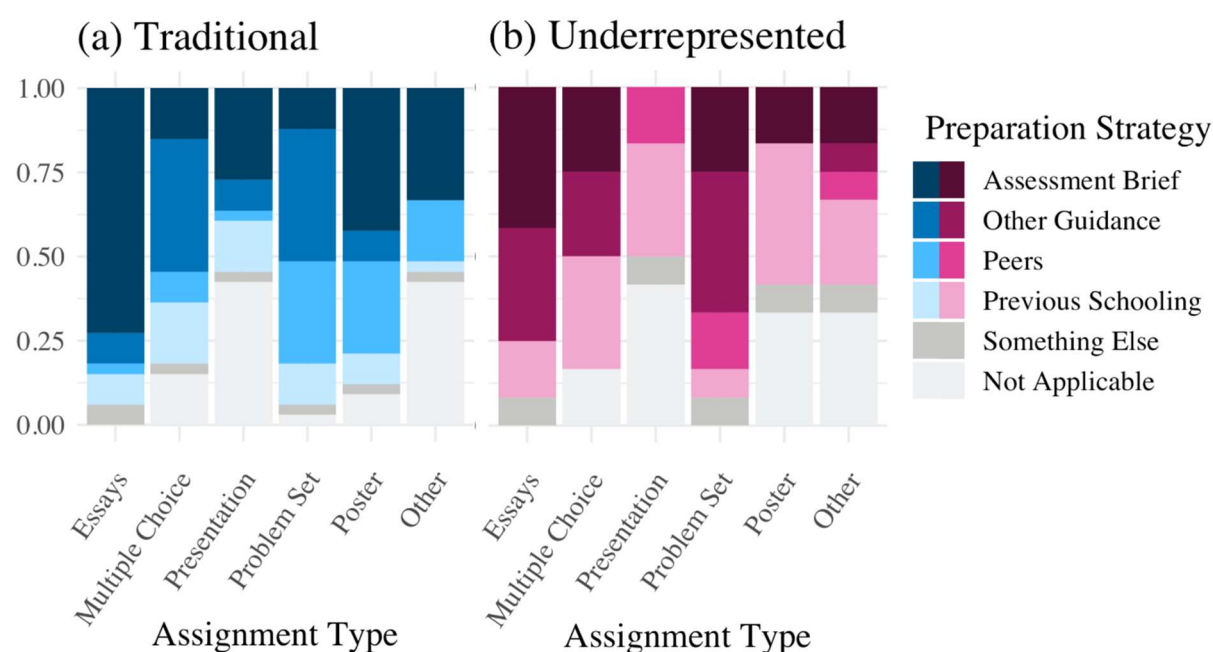


Figure 5. Traditional (33) and underrepresented (12) students’ report of the strategies which they find best prepare them for different kinds of assessment.

One striking difference between students from traditional and underrepresented backgrounds is the use of assessment briefs. Students from traditional backgrounds identify them as the most helpful resource more frequently than underrepresented students. The latter rely more on their school background. This is especially true for essays, presentations, and posters. Traditional students more often claimed to rely on their peers, especially for problem sets and posters.

To investigate why ethics might be a poorly understood concept, we asked students if they ‘learn[ed] anything about ethical issues in data collection’ prior to attending University. Responses were converted to numerical Likert responses for analysis (1 = ‘I didn’t learn about this at all’, 2 = ‘I don’t remember’, 3 = ‘I knew a little bit about it’, and 4 = ‘Yes, this was covered extensively’.) Full means are provided in the online supplementary material. Mean ratings across groups hovered around the mid-point (2.5) of the scale, with a grand mean of 2.47 (SE=0.16). Findings suggest students generally rate their ethics background knowledge as negligible. There was some variation by cohort, with final-year students rating their knowledge as slightly lower (M=2.21, SE=0.28) than

first- ($M=2.37$, $SE=0.38$) and second- ($M=2.65$, $SE=0.22$) year students. These ratings are all within their respective SE ranges.

In a textbox, 21 out of 45 participants provided key words to 'what you learned about research ethics prior to university'. Several respondents identified exposure to research ethics in Psychology at secondary school. Common themes included: giving informed consent (11); confidentiality, privacy, or anonymity (8); right to withdraw (3); safety or wellbeing (3); and bias or observer's paradox (3).

We also asked participants 'How diverse and inclusive do you consider the curriculum to be?'. Overall, on the 0-10 scale where 0 was defined as 'Not at all diverse or inclusive' and 10 was defined as 'Extremely diverse and inclusive', students rated their degrees as a mean of 7.4 ($SE = 0.25$, with a range of 2-10). Means across cohorts and degrees and across traditional and underrepresented students were within the standard error of each other.

The focus group contributions highlighted variation in how connected students on different degree programmes felt. To follow up on this, we asked survey participants to rate on a 10-point Likert scale (1 = lowest, 10 = highest) whether they felt they were part of the school-wide community. Figure 6 shows mean community ratings (error bars represent standard error) by cohort (Figure 6a) and degree programme (Figure 6b).

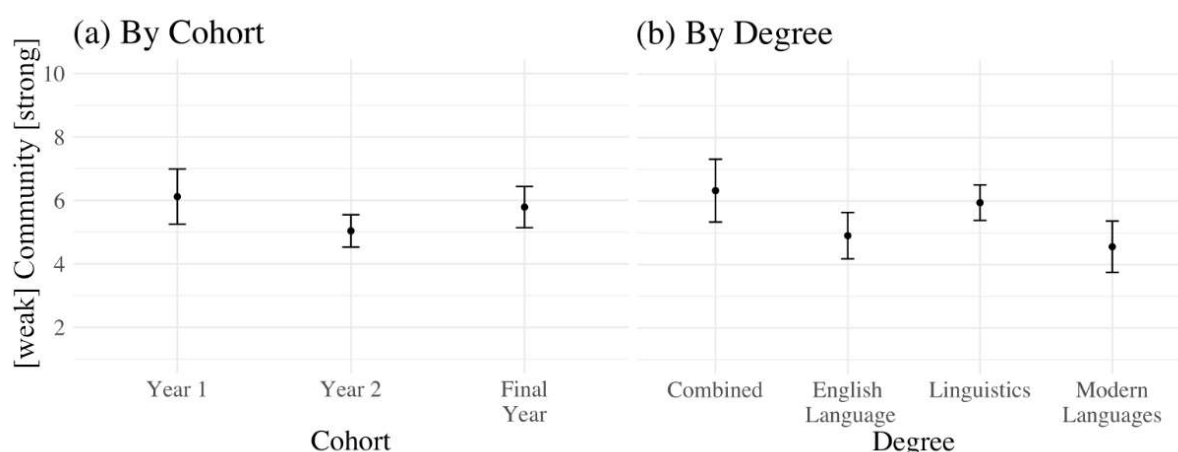


Figure 6. Mean ratings of community by Cohort (eight from Year 1; 23 from Year 2; and 14 from Year 3) and Degree Programme (17 students of Linguistics, 11 students of English Language, 11 students of Linguistics in combination with a modern language, and six students form a different joint honours programme).

Figure 6a shows a dip in respondents' sense of community for the Year 2 students ($M=5.04$; $SD = 2.67$); Year 1 students rated community slightly higher ($M = 6.13$; $SD = 1.81$), as did Year 3 students ($M = 5.79$; $SD = 2.36$). Students who study in combined degree programmes had the highest community rankings throughout ($M = 6.33$; $SD = 2.34$), despite being spread across subjects and/or administrative units (however, only six respondents fit this category). The 11 students studying linguistics alongside a Modern Language reported the lowest community rankings (4.56 ; $SD = 3.36$). Students of English ($M = 4.91$; $SD = 2.91$) and Linguistics ($M = 5.95$; $SD = 1.47$) were in-between those groups.

The focus groups also identified communication as a key issue that closely related to community-building. Respondents ranked 10 methods of communication, 'in terms of how useful they are for getting key information about your studies'. Some of these were

specifically identified by the research team (student blog, social media, newsletter); others arose in focus groups (email, lectures, seminars, virtual learning environment (VLE), group chat, personal tutors, peer mentors). All means of communication were available and in use by the school or between students in the academic year 2021-22. Figure 7 shows a heatmap of the ranking results, demonstrating that email was clearly ranked highest among channels for receiving useful information, with lectures, seminars, and VLE not far behind.

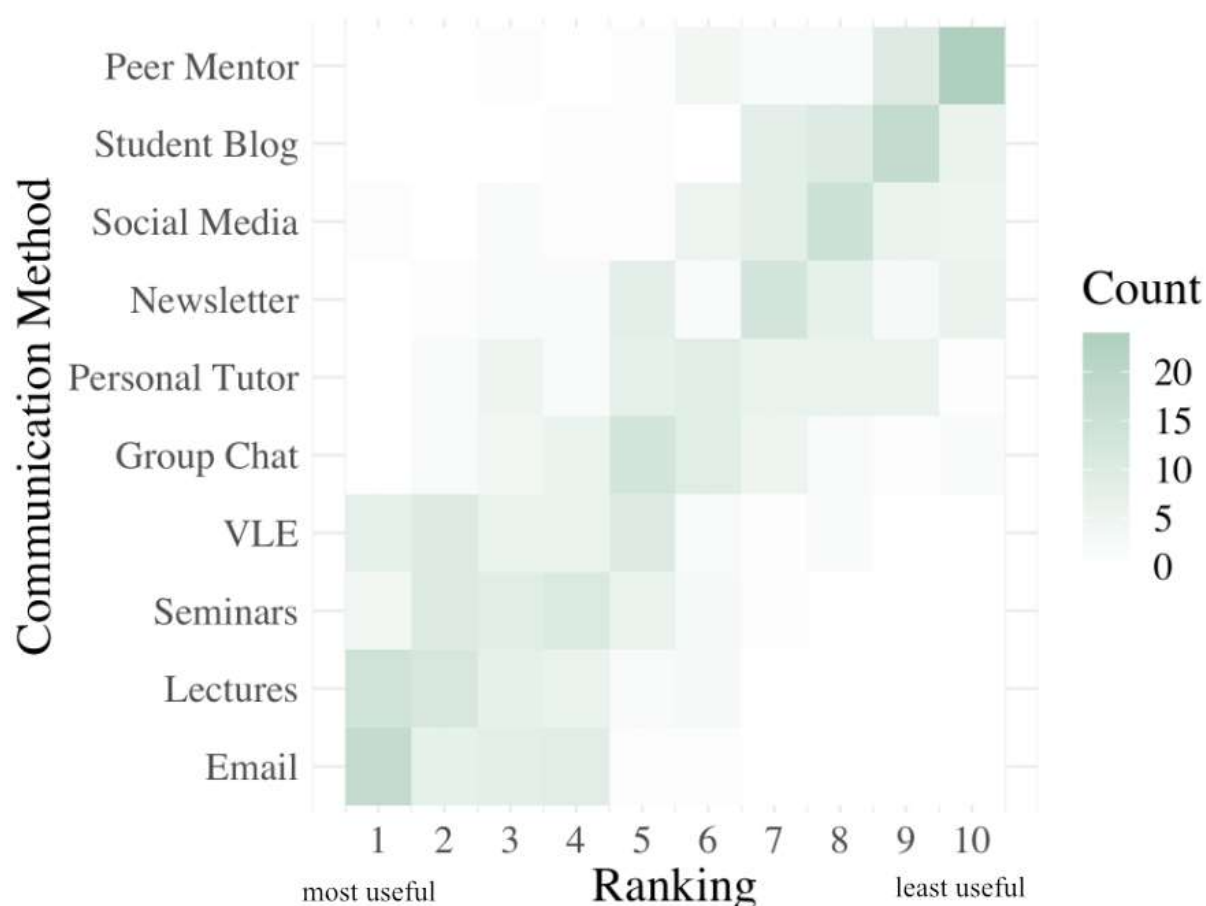


Figure 7. Heatmap of the rankings of 10 methods of communication from all 45 participants.

To explore inclusive and effective communication in more detail, we asked students in another open-ended question how communication could be improved. Twenty-seven of 45 participants answered this question with considerable variation. Some found little room for improvement. Email featured prominently among suggestions for change, with some students wanting more frequent emails, some wanting more tailored emails, and others wanting more casual language. Other students complained about the large number of emails, and some reported not receiving key communications via email. Alternative means of communication, such as VLE or lectures, were also mentioned as primary means of communication, though respondents' primary focus was on email. Some identified confusion arising from too many communication channels, suggesting a focus on email, the learning platform, and lectures. Figure 7 supports this: among the lowest ranked information sources are newsletters, social media accounts and student blogs.

Analyse and Target

Synthesise insights from qualitative & quantitative data (Step 6)

Framework

Staff and student co-researchers should all view the full dataset and contribute to data interpretation. The team may also use opportunities within the immediate and wider institutional context to share early findings and solicit feedback. In preparation for designing concrete materials for addressing the hidden curriculum (section 4.2), the team should consider where and how interventions will be best interleaved in the existing curriculum.

Application

Our qualitative and quantitative results highlighted core issues in learning and teaching, and this formed the initial focus of our integrated analysis. From findings that directly contributed to the students' learning environment, we identified six key gaps that could be filled by integrating new resources into our existing curriculum. Gaps i to iii emerged primarily in the focus group discussions; gaps iv to vi mainly address findings from the online survey.

- i. Opaque subject, institutional and general higher education terminology (see also Figure 7).
- ii. Poor understanding of differences between seminar and lecture teaching.
- iii. Greater expectation of continuity from earlier studies than is borne out, especially for students who studied English Language past age 16.
- iv. Insecurity about technical and technological aspects of studying, issues with mobile accessibility.
- v. Lack of confidence in communicating with and approaching teaching staff.
- vi. A lack of confidence in finding, reading, and citing primary literature for assessments, and lack of awareness of existing resources addressing this issue.

Preliminary project findings were presented at Newcastle University's annual teaching and learning development conference, as well as relevant committees in the school. This allowed the team to assess the feasibility of implementing immediate interventions via various channels.

Create interventions for exposing the hidden curriculum (Step 7)

Framework

Materials created to target the hidden curriculum should involve continued input – technical, intellectual, creative – from the entire team. Materials should take advantage of multiple avenues of delivery (e.g., presentations, videos, quizzes, readings) and be centrally located and archived so that students and educators can easily access them throughout their degree. In-person activities can be built around the materials, but for the hidden curriculum to be fully revealed, interventions must be always maximally accessible to all students.

Application

Many gaps identified above displayed differences across underrepresented and traditional students, in particular communication (addressing issue v) and foundational academic skills (i, iv, vi). Whether students rely on informal peer/family support (traditional students) or prior educational experience (underrepresented students), as educators we must do more to familiarise students with the format, register and location

of educator-created documentation and to encourage them to engage in communication channels with us.

Given students' preferred methods of learning and communication revealed in the investigation phase, we implemented our interventions primarily as a suite of online resources, centrally located in our VLE. These resources took the form of videos, interactive presentations, quizzes, and reference websites. We additionally designed in-person activities around these materials to flag their availability to students and boost engagement. The full outputs, and the gaps they target, are outlined below, and detailed in the online supplementary materials.

New resources

Our materials included new reference resources with student accessibility at the forefront (<https://lead-ncl.gitbook.io/language-and-linguistics-reading-and-resources/>). They were embedded in induction materials for incoming students and flagged for continuing students. More details on the latter are discussed under Step 4.

First, we built a Jargon Buster to make opaque terminology explicit (<https://blogs.ncl.ac.uk/epic/jargon-buster/>). This includes everything from terms specific to UK higher education (e.g., degree classification, the way in which UK degree results and marks are ranked) to institution-specific terms. The Jargon Buster is fully searchable and cross-referenced. This also shaped staff-centred discussions about consistent use of terminology: where possible, staff have moved from using different terms interchangeably to new, consistent student-facing terms that are more transparent.

Second, we used Genially to create interactive 'Degree Snapshots': single page explainers of what students could expect in their specific degree, including required modules and module options (i, iii, iv; <https://lead-ncl.gitbook.io/hidden-curriculum/appendix-4/degree-snapshots>). Embedded in these snapshots are explanations of how semesters and credits work at Newcastle University, echoing information available in the Jargon Buster.

Third, we updated our curated list of online readings and resources about language and linguistics (i-iv; <https://lead-ncl.gitbook.io/language-and-linguistics-reading-and-resources/>) and created an online searchable version of our referencing style guide (iv, v; <https://lead-ncl.gitbook.io/language-and-linguistics-style-guide/>). Although the style guide and several related resource lists already existed on the VLE, many students reported not knowing about these resources or having difficulty accessing them. Student co-researchers led in consolidating these resources and porting them to Gitbook; the links to Gitbook were then embedded within induction materials on the VLE. The move to Gitbook enhances accessibility, with a built-in search interface and mobile-friendly layout.

Fourth, we created four student-presented five-minute videos (<https://lead-ncl.gitbook.io/hidden-curriculum/appendix-4/videos>). One video addressed the transition to studying linguistics, including setting up expectations about prior knowledge of the subject (iii). Another video outlined a range of software and online platforms from the VLE to specialist software from linguistics (iii-iv). A third video focused on how to make use of in-person communication like optional consultation/office hours while a fourth video focused on how to engage with teaching staff via email and the VLE (v). Videos were scripted and recorded by student co-researchers using an accessibility-first

mindset. Scripts were provided with the videos and these fed into full closed captions, which allows for easy adaptation and re-recording for future students. The video series targeted incoming students, but staff adapted them to make short 'refresher' videos covering the same topics for continuing students.

Fifth, we created several interrelated resources targeting gaps in academic skills (<https://lead-ncl.gitbook.io/hidden-curriculum/appendix-4/research-skills>). To ensure understanding of key module components and behaviours for incoming students, we integrated three short interactive Genially presentations into their induction. These outlined the aims and expectations for seminars and lectures, and highlighted key features and skills involved in effective notetaking (iii, vi). Four additional Genially presentations targeting independent research skills (vi). These were adapted with permission from existing Newcastle University library materials and customised for linguistics students, focusing on distinct stages of independent research: plan and scope, search and evaluate, organise, and store, and reference and attribute. Customising library materials was important to underscore how general research expectations are applied in linguistics; for example, using primary literature linguistics students are likely to encounter to explain what falls inside and outside the scope of subject-specific research questions. This also allowed us to link back to our own reference resources, such as the new style guide. The interactive resources addressing academic skills were flagged as part of year 1 introduction, but also connected to a skills audit (<https://ccuskley.site44.com/skills/>) designed for continuing year 2-3 students, given the acute needs identified in this area across years. The skills audit uses subject specific questions to assess student competence in the four independent research areas, which we would already expect year 2-3 students to have some experience with. These questions describe a typical study scenario in which students can choose between three possible approaches. Students receive feedback on each question, but also an overall score for each independent research area. Depending on their score in each area, the audit prompts them to review the corresponding interactive presentation to target their specific weaknesses. Only the student should see their score and recommendations.

Making resources visible

While the creation of resources was key to addressing the hidden curriculum, we also made detailed dissemination plans. The hidden curriculum can be available but in practice be inaccessible. All materials were initially embedded within the VLE induction pages, separated by year. This allowed us to frame resources like the independent research interactives as essential viewing for year 1 and as targeted review for other years.

Though these induction pages are available to all students throughout the year, we took further steps to promote engagement. First, although designed primarily for independent engagement, the resources were integrated into essential in-person group induction activities: they were specifically flagged and explained, and students were encouraged to explore them independently in a staff-facilitated 'VLE Scavenger Hunt'. Second, all staff were given access to the resources, including a summary of resources and their location on the VLE. This allows staff to flag these resources as part of personal tutor meetings or assessment feedback, and 'pull through' specific resources into their own teaching as needed, particularly the research skills.

Evaluate (Step 8)

Framework

Given the context-specific nature of the hidden curriculum and the inevitability of change in its academic context, our framework is fundamentally iterative. This should include evaluation of any resources created, collecting feedback on usability from students and adapting resources as needed, as well as tracking longer-term outcomes (e.g., improvements in academic skills) across cohorts. Full reapplication of the framework may form part of regular strategic exercises or be adopted where disruptive events may fundamentally change the nature of the hidden curriculum and the needs of students. This also highlights the flexibility of the framework: as resources allow, it may be effective to revisit survey-based quantitative data collection as part of regular hidden curriculum audits, while waiting to undertake more resource-intensive qualitative data collection once potential shifts in the hidden curriculum are identified.

Application

The evaluation of our interventions is ongoing, as materials were introduced at the start of the 2022-23 academic year. Nonetheless, the hidden curriculum is now a key focus in staff discussions of teaching and learning, both within the subject area and across the school. Staff across the subject are integrating our materials into their teaching, especially at year 1.

By using web-based materials, we can monitor engagement through built-in analytics. While VLE pages flagging the availability of the style guide on Gitbook have had views from less than 60 (26%) of our student roster for 2022/23 across all years, the Gitbook itself has had views from over 100 (43%) of our student roster. The higher proportion for the latter indicates that this more accessible format has led to students sharing this resource amongst themselves. On the other hand, videos get engagement almost exclusively through the VLE, clearly indicating that to boost engagement with these materials we must either a) increase engagement with induction materials on the VLE, or b) integrate these materials into in-person teaching. Systematic, longer-term evaluation of these materials will take time. Below, we discuss broader lessons and insights of the framework and our specific application.

Discussion: Lessons and insights

As perceived asymmetries in learning communities fossilise early (Møller Gregersen et al., 2021), any limited sense of learning community impedes peer-initiated knowledge exchange (Brouwer & Janson, 2019), which our findings identify as a key route to information. We now discuss how our findings speak to previous findings in the hidden curriculum literature.

Where students meet the institution

Students seem to be aware of most educator expectations and support offerings, yet feel too confused, overwhelmed, or intimidated to access support and/or and engage with educators directly. Educators may expect students to freely make use of offered support, but even when information on how to access this support has reached students, understanding when it is appropriate to use it seems to lag. Our students often perceived support as being for others, even though some of the confusion they themselves experienced can be resolved through this support. Knowing when to take advantage of this support is a pernicious part of the hidden curriculum, particularly for

underrepresented students: transfer of this knowledge may rely on information transmitted between students, or to students from family members and friends with university-level experience. We therefore again see the importance of peer-exchange, which is contingent on a strong sense of community and belonging.

Our study uncovered inequities in community formation and sense of belonging, some of which were related to institutional structures. For instance, some of our Linguistics degrees at Newcastle University involve students taking modules managed by other administrative units, meaning students necessarily interact and operate within this structure whether they understand it or not. Thus, one component of the hidden curriculum for our students is defining what facets of this complex structure they need to know about, which will differ fundamentally from the level of understanding required of educators and administrative staff.

Students also require more support in forming interpersonal relationships with all their teaching and support staff that will foster meaningful contact. Orón Semper and Blasco (2021, p. 491) suggest that quality of student-educator interpersonal relationships impacts how students “receive new learning and give it meaning”. Some students may arrive at university with greater confidence in how to engage with university staff. Moreover, despite popular discourse surrounding contemporary students’ issues with email (e.g., Noor, 2021), students still identified email as the most useful way of communicating with staff. It remains to be seen how effective our resources are in improving student-staff interactions, but again, a deeper understanding of students’ prior experience and the barriers they face to initiating contact is required.

Finally, as educators, we must not assume prior knowledge or expect key academic skills to be acquired implicitly. Following Portelli (1993), it is the duty of educators to make explicit those aspects of the curriculum that form part of the skills and knowledge outcomes. The challenge is, of course, ensuring that educators know what constitutes the hidden curriculum for their students at any given point. Our framework provides a structured approach to revealing this.

Where students meet the broader academic system

Our data also revealed systemic issues. For example, although students rated curriculum inclusion and diversity highly in their questionnaire responses, focus groups raised specific issues with respect to diversity. With 14 of 15 staff members being White, students keenly observed a lack of racial diversity that is characteristic of academia more broadly (e.g., Moore et al., 2018). Focus group participants suggested lack of racial diversity was reflected in research-led content delivery. Although languages spoken in majority non-White contexts are represented in our curriculum and issues of migration are covered in several fields, there is greater overall representation in our current curriculum of European languages and cultures, in particular English and English-speaking cultures. A perceived lack of LGBTQIA+ content in class materials was also reported; such content is present in both the curriculum and our research, particularly in courses with sociolinguistic topics, but perhaps not given the space and time students might expect. Alongside necessary institutional support for increasing staff and student diversity, a medium-term goal to mitigate the effects of the whiteness of the system is to make representation in the content of our degrees more diverse.

Another key systemic issue was COVID-19, which has fundamentally affected students' sense of community and their prior learning experiences. For second- and final-year students in our sample, independent online learning was a feature of their university studies. First-year cohorts had only experienced in-person university studies but may have experienced online learning during secondary education. Many issues identified in focus groups about in-class behaviours, expectations and activities may well have been exacerbated by students lacking relevant recent experience. This is indicated by some results in which second-year students diverged from other cohorts, notably their uncertainty about academic skills and their lower ratings for 'sense of community'. Online-only learning fundamentally affected social relationships across higher education, and it will take time and effort to rebuild these relationships. We have partnered with our students in forming a subject-specific student society (<https://nusu.co.uk/activities/view-society/487>) with regular meetings and events to foster these relations. Nonetheless, educators should be aware of how effects of the pandemic might manifest within the hidden curriculum for years to come. Rates of anxiety and depression have increased especially among young adults because of the pandemic (Hawes et al., 2021). This may exacerbate existing inequalities: for example, immunocompromised students or those with pre-existing mental health issues have had more drastically altered experiences and will likely experience in-person learning at university with more trepidation if COVID-19 remains a risk.

Conclusion

We presented a structured framework for collaborating with students to expose the hidden curriculum, alongside a successful application in Linguistics at Newcastle University. The framework centres around investigating the shape of the hidden curriculum using both qualitative and quantitative approaches. The resulting insights can shape resources for targeting the hidden curriculum which need integration into regular curriculum review.

As concrete ingredients of the hidden curriculum in our own context, we identified specific forms of communication and support as well as explanations and expectations regarding academic skills. In response to exposing these ingredients, we developed new materials for preventing their effects on future students. We also uncovered aspects of the hidden curriculum that require more investigation on a practical and philosophical level. At a time when online resources are heavily used for information dissemination, students are often aware of resources but do not know how to confidently use them in a general sense without being confident in doing so on an individual level. Knowing how to form new communities and a sense of belonging in a world split between virtual and in-person spaces is in urgent need of work. This would enhance interpersonal relationships between staff and students, which is key for meaningful uptake of learning in a modern context.

Despite the remaining challenges, we are optimistic that the framework proposed, and the example of our application will serve to guide and inspire others to increase efforts in exposing and mitigating the effects of hidden curricula and, more importantly, can bear fruit in doing so.

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Supplemental online material

A full set of questions for focus groups and the online study, together with detailed results for the latter, as well as an inventory of resources created can be accessed at <https://lead-ncl.gitbook.io/hidden-curriculum>