Core modules and student satisfaction on undergraduate programmes[1]

OVERVIEW

Previous research at LSE has suggested that there may be a relationship between 'joint' programmes and student satisfaction – that students on joint programmes tend to be less satisfied with several aspects of their experience. This analysis extends that work by exploring the relationship between the number of 'core' modules a student takes in their home and outside departments over the course of an academic year for undergraduate programmes.

Core modules are defined here as for-credit modules which all students on the programme must take to complete the year of study. They can be in the student's home department (the department which formally hosts their programme) or in an 'outside' department (any other department at LSE). The analysis shows that student satisfaction seems to be correlated with the number of 'core' modules in a given study year of a programme.

Generally speaking, the number of core modules in a student's home department has a positive impact on satisfaction. An increase of one core module can increase satisfaction by over 3 percentage points. But core modules in an outside department tend to have the opposite effect. An increase of one core module in an outside department can decrease satisfaction by over 6 percentage points.[2]

These findings are, at this stage, indicative. We do not currently have data that will allow us to explore causal relationships, and it is possible that other programme-level characteristics may be responsible for some of the patterns we see in this analysis. For example, we cannot identify the impact of different departments, or of the difference between qualitative and quantitative programmes of study.

Nonetheless, this data shows important relationships between the number of core modules in a student's home or outside department and their satisfaction with various elements of their year studying the programme. Overall, it indicates that students may not be adequately prepared – in intellectual terms – for 'visiting' outside departments as a core element of their programme, and that a strong and compulsory grounding in a single home department can have a positive impact on a wide range of measures.

Next steps could:

- Review individual student satisfaction on a programme, looking at the core/non-core and home/outside department status of every course taken.
- Review individual student satisfaction at course-level, looking at whether the course was in their home or outside department, and whether it was core or optional.
- Explore whether the impact of core outside courses is different on programmes that the School considers to be 'joint', compared to those that are not considered joint.

[1] A previous version of this paper did not emphasise that this analysis only covers undergraduate programmes. We hope to extend the analysis to postgraduate programmes in the near future, subject to data availability.
[2] Because the effect works in opposite directions for home and outside departments, we have not modelled the impact of the total number of core modules within a programme.

- Identify programmes or courses with atypical patterns to explore, with qualitative research, how students can be supported to study successfully in 'outside' departments.

Considering student-level, not programme-level, satisfaction may also give enough datapoints to separate departments and years of study, meaning that we would be able to explore whether core home and outside modules have different effects in different departments and/or years of study. For example, we might hypothesise that core outside modules are more challenging in first year, when students are still developing a grounding in their primary discipline.

DEFINITIONS & MODEL

Within this analysis we used the following definitions:

- A **core module** is one where programme regulations mean that there is only one for-credit way for a student to meet a paper's requirements – usually a single full-unit course available on the paper, but in some instances two half-unit courses available. In other words, all students on a programme in a study year will have to take the same course or courses.
- The **home department** is the department that formally hosts a programme.
- An **outside department** is any other department within LSE.

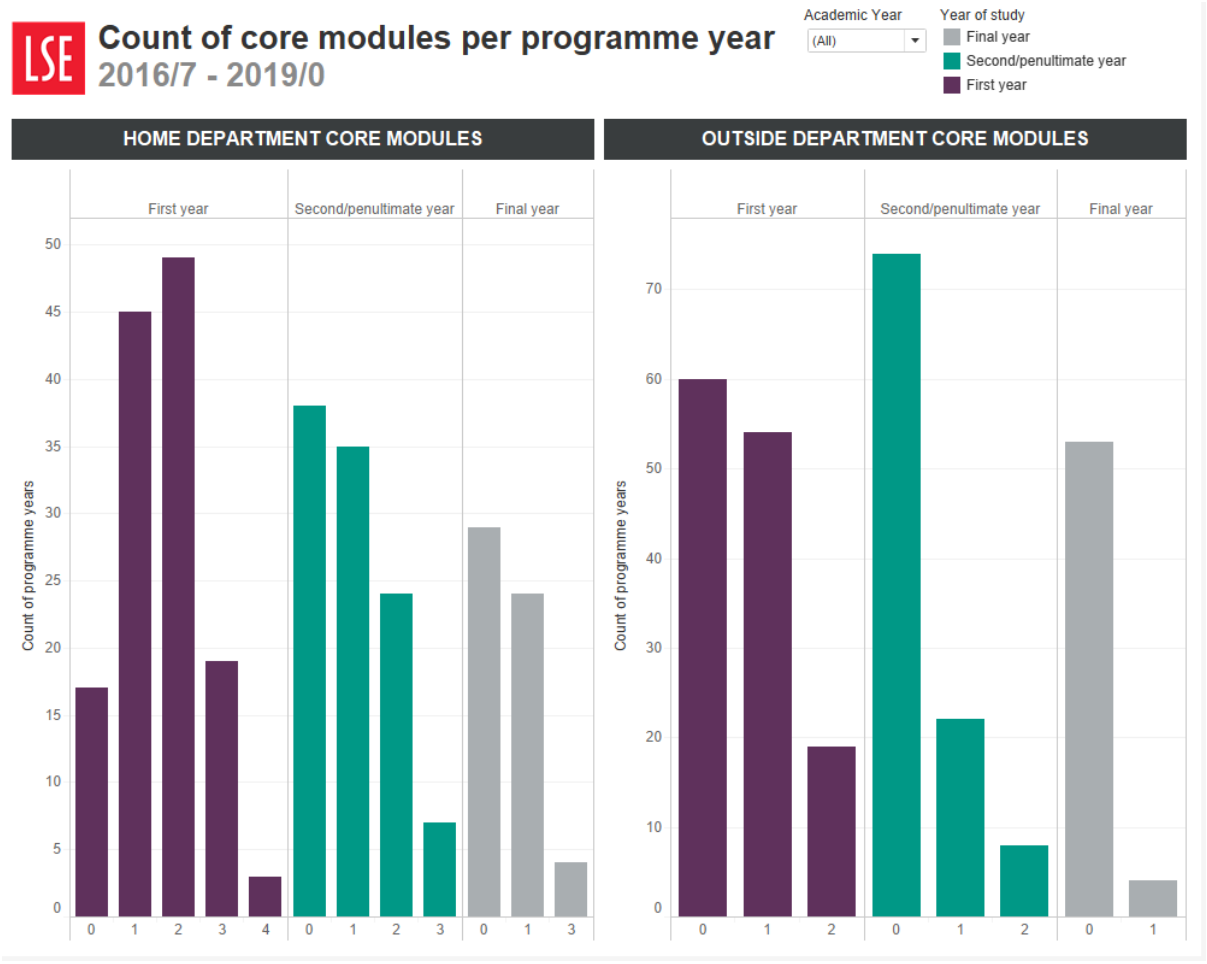
We looked at annual satisfaction for each of the core 'NSS' questions. In Year 1 and 2 (and Year 3 for 4-year programmes) data came from our internal programme surveys, and for the final year data came from the NSS. We used surveys from 2016/7 to 2019/0 to run two linear regression models – one for the count of core home modules and one for the count of core outside modules.[3] In each model, we controlled for the academic year, the year of study and a weighted control for the number of students who responded to the survey.

Figure 1 shows the number of programme years with core home / core outside modules over the four academic years included in the study. For example, it shows that between 2016/7 and 2019/0, 49 sets of first year programme regulations mandated that students should take two core home department modules. This will often represent four instances of the same programme, although changes to programme regulations will sometimes mean a different count of core modules from one year to the next. Core modules are generally more common in first and second year, and core modules in the home department are more common than in outside departments.

We could not introduce a control for the department or programme as this removed too much variability from the variable of interest (count of core modules). This is a limitation of the study: we cannot be certain that the differences observed are down to core module count and not some other underlying variable at the department or programme level. Further research, outlined above, could help clarify this.

[3] We ran two separate models to try to minimise the effect of multicollinearity between the count of core home and core outside modules: because students take only four assessed modules per year, taking a core module in the home department necessarily reduces the number of modules that are available to be core in an outside department. Separating into two models does not wholly solve this problem but does mitigate the issue.

Figure 1: count of core home department modules and core outside department modules per programme year



The figures that follow in this paper show the impact of a one-unit increase in core modules on satisfaction – for example, having one additional core home module on a programme led, on average, to a 3 percentage point increase in satisfaction with helpfulness of comments.

Bars coloured green are statistically significant (dark green at the 0.01 level, light green at the 0.05 level). Bars coloured grey are statistically significant at the 0.1 level, higher than the usual threshold of 0.05. Where a bar is not shown, this means that increasing the core module count did not have a statistically significant effect on satisfaction.

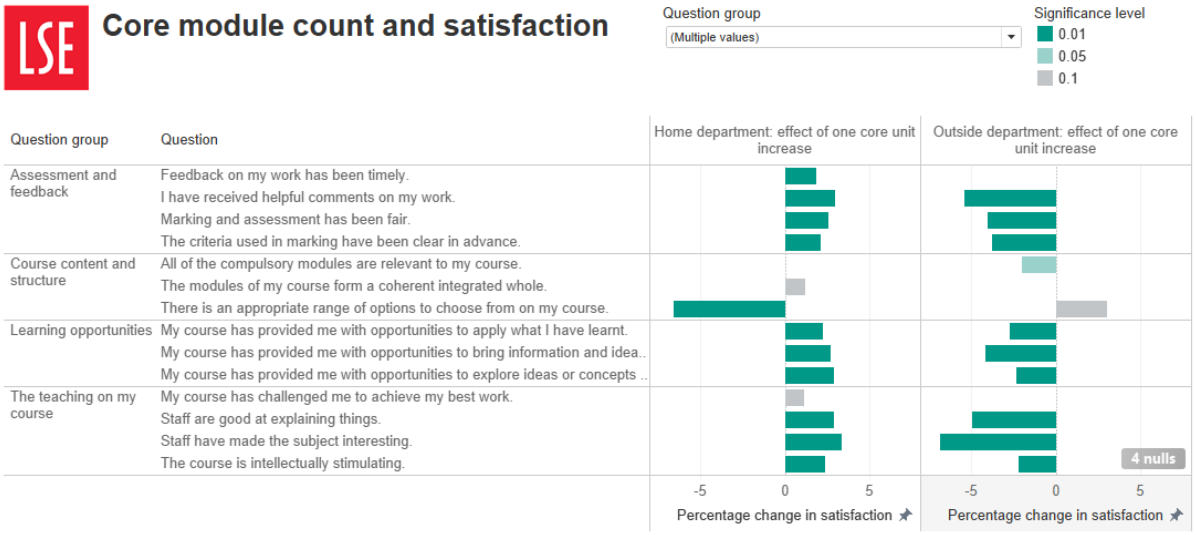
FINDINGS

Teaching, learning, programme structure and assessment

As the number of core modules in a student's home department increases, so does their satisfaction with multiple aspects of their educational experience. But adding core modules in an outside department tends to reduce satisfaction.

Figure 2 shows the impact of core home and outside modules on satisfaction with teaching, learning opportunities and assessment. Against almost every indicator, core modules in the home department have a positive impact on satisfaction, and core modules in an outside department have a negative impact.

Figure 2: core module count and satisfaction with assessment, programme structure, learning opportunities and teaching



Overall, students seem to feel more confident in their grasp of the subject when they have a strong and compulsory structured grounding in their home department. They find the teaching across their programme more interesting and engaging, they are better able to engage with feedback on their work and have experienced the chance to deepen, extend, blend and apply their learning across different courses.

Conversely, students with more core outside modules apparently find it harder to engage fully with the pedagogic aspects of their programme. The biggest negative impacts are on whether staff make the subject interesting, whether comments on work have been helpful and whether staff are good at explaining things. This may indicate a less well-developed basis in the 'outside' discipline, where staff may use approaches or reference frameworks that are unfamiliar to 'outside' students. This may also underpin the dissatisfaction with fairness and clarity of marking – perhaps 'outside' students find it harder to interpret the parameters against which they have been judged, or possibly having different parameters across different core elements of the course is frustrating.

Satisfaction with learning opportunities is also lower. As core outside modules increase, students become less satisfied with their ability to apply learning, explore ideas in depth and – perhaps surprisingly – to bring together ideas from different topics. Although they may be exposed to different subjects and approaches by taking compulsory modules in an outside department, this is not a truly interdisciplinary experience: they are not bringing these together in a way that deepens

their intellectual engagement across the programme. Core outside courses have a negative effect on students' perceptions of the relevance of core courses as well – another dimension of the same issue, perhaps.

Overall, it seems that a defined set of core courses in a single home department can provide a very important basis for students to feel that they are engaging with and deepening their subject knowledge in a rich and satisfying way. Bringing together learning from different spaces within a common intellectual framework, or set of frameworks, is clearly important for student satisfaction with their own autonomous ability to develop and control their learning. Possibly students are not being equipped with the tools to do the same autonomous intellectual work across disciplinary frameworks, and this is leading to them feeling less satisfied with their learning experience.

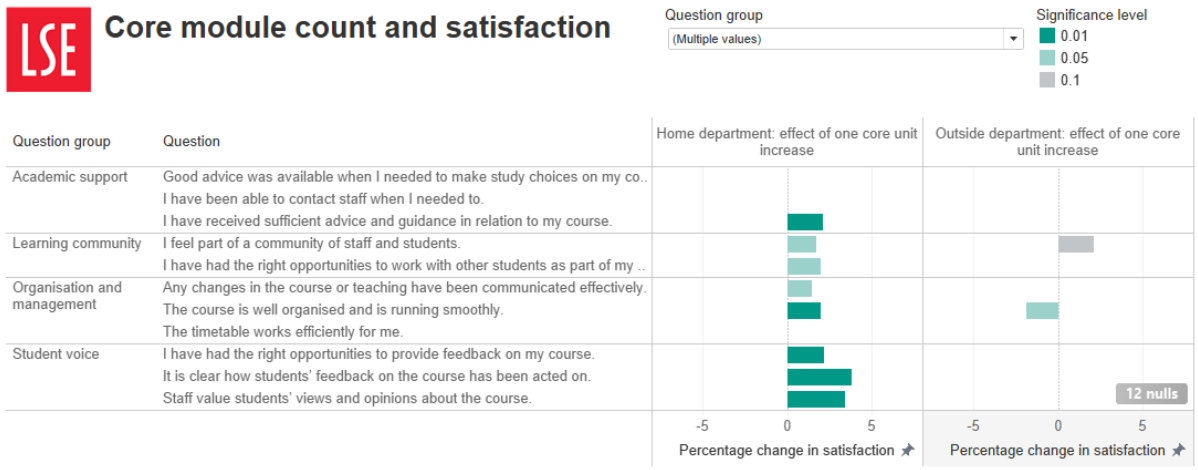
The obvious, and perhaps expected, exception is satisfaction with the range of options on the programme. Although compulsory home department modules appear to drive satisfaction against many metrics, students with more core home department modules do not necessarily appreciate the limited choice that must inevitably follow. Note that, although non-significant at the 0.05 level, programmes with higher core (i.e. non-optional) outside department modules have higher satisfaction with choice on the programme.

Academic support, learning community, organisation and student voice

We might hypothesise that students with more core modules – where they learn alongside the same group of peers, whether in home or outside departments – should feel more embedded in a supportive community where their voices are heard. We might also expect that organisation and management would be more satisfactory on programmes with a defined structure of core courses.

But as Figure 3 shows, these benefits appear to accrue primarily on programmes with more core modules in the home department. There are few significant effects when core modules increase in outside departments. Unlike the previous section, satisfaction does not decrease with higher core outside module counts. Rather, the core outside module count does not have a discernible effect on these aspects of student satisfaction.

Figure 3: Core module count and satisfaction with academic support, learning community, organisation and student voice.



The biggest differences are around satisfaction with student voice. Students with more core modules in their home department are more likely to feel they have a voice on their programme, and

particularly that their feedback has been acted on. They may find it easier to navigate the feedback systems and norms, and to see – or even experience – how the feedback that they share is turned into action by the department. Or their feedback may, because it has been shaped by multiple experiences within the same department, be more relevant to the department in making improvements.

Students on programmes with more core home modules also seem to feel more integrated into a community of both staff and students. They get sufficient advice and guidance about their programme, and they are more satisfied with opportunities to work with other students. It is particularly interesting that these same benefits do not seem to apply for programmes with more core outside department modules. A sense of community may be formed outside an individual programme – students may need to feel part of a department or a discipline, meaning that studying multiple courses with the same group of people is not in itself a guarantee of 'community'.

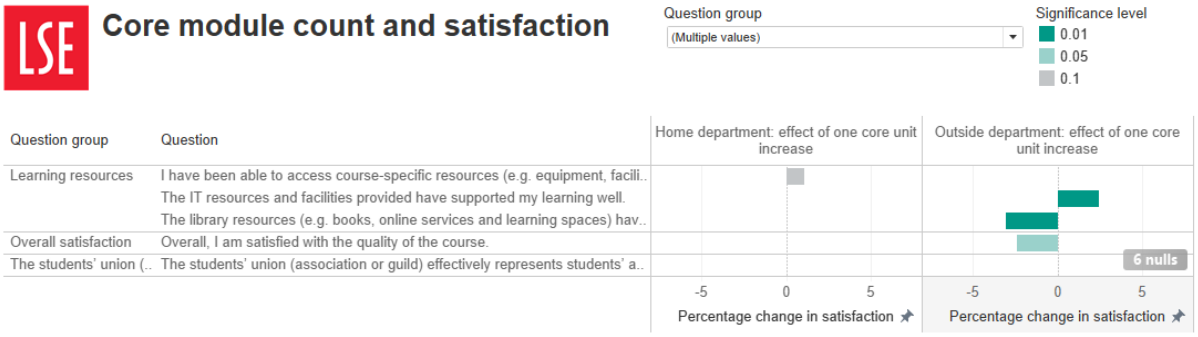
Course organisation was the only area where core outside modules had a significant impact on satisfaction – and the impact was negative (unlike for core home modules, which had a positive impact on course organisation). Difficulties in co-ordinating approaches and expectations across departments may be having an impact on student satisfaction here.

Learning resources, student union and overall satisfaction

On most other measures, student satisfaction patterns do not indicate a clear relationship with core module count (in home or outside departments). In some cases, there are differences in satisfaction – for example, students with a higher core outside module count are more likely to express satisfaction with IT resources, and dissatisfaction with library resources. In others – such as satisfaction with the students' union or the welfare facilities and resources – there are no discernible differences. We would not expect core module count to make a major difference on these fronts, unlike some of the other differences observed here.

But note that core outside module count does seem to have a negative impact on students' overall satisfaction with their experience.

Figure 4: Core module count and satisfaction with learning resources, the union and overall



CONCLUSIONS AND NEXT STEPS

This analysis has shown that core home and outside module count appear to have a relationship with student satisfaction with various aspects of their programme at undergraduate level. Although we cannot make claims to a causal relationship, the patterns are strong. Further research could provide more compelling evidence by, for example, looking at individual student satisfaction based on their specific profile of courses.

Specifically, students seem to have a richer engagement with their curriculum and more satisfying interactions with academics when they have more core courses in their home department. They also feel a stronger sense of community with staff and students, and that their voice is heard in relation to the programme. Core courses in outside departments tend to have a negative effect on these indicators.

In order to understand why these patterns exist we should undertake qualitative research with students on programmes with core courses in home and outside departments. This will provide insight into how students experience the programmes and help explain what underpins the differences observed in this analysis.

Overall this analysis would support a more structured approach to programmes in general, with a strong grounding in the home discipline and robust preparation for students who are required to visit outside departments. These students may also benefit from some guided support in drawing together knowledge and ideas from across disciplines so that they can make connections between their learning in different subjects.

Further analysis at the student level would allow us to explore whether core modules have a different impact depending on the type of discipline, the student's year of study and other background characteristics that might be expected to influence satisfaction.

Another important angle will be to look at non-core courses taken in outside departments. Do the challenges we have observed for 'visiting' students also apply when they choose to take a course in an outside department, rather than being required to do so? Do they apply when they are required to go outside, but have a choice of courses? Do they apply when students choose to study in multiple different departments, rather than 'visiting' just one?

Within all this it is important to remember that students with high numbers of core home courses tend to be less satisfied with choice on their programme, but that on most other dimensions core home modules increase satisfaction. It will be important to strike a balance to find the amount of choice that leads to optimum satisfaction across all measures.