The Battle for Latin in UK Universities: A Statistical analysis of factors driving student success and failure in beginners’ Latin modules

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The battle for Latin in UK universities: a statistical analysis of factors driving student success and failure in beginners’ Latin modules

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ABSTRACT
In the UK, Latin is often seen as an elitist subject taught largely at fee-paying schools. Over the past generation, however, great strides have been made in opening up the subject to students from all backgrounds. A major hindrance to widening access to Latin at university level is that the language can often prove challenging for students. Data collected for this article reveal that only 77% of Latin students on beginners’ modules in UK universities achieved a pass. Or in other words, nearly a quarter of students embarking on the study of Latin either fail or withdraw from their module.

This article seeks to investigate the problems of retention and progression in support of the battle to make the study of Latin sustainable and accessible in higher education. By analysing survey responses from 29 UK universities offering beginners’ Latin modules, it explores the impact of factors such as module weighting and duration, contact hours, class sizes, textbooks and assessment methods. In so doing, it breaks new ground in its rigorous statistical analysis of a significant set of quantitative data in an effort to improve our understanding of successful ancient language teaching, tackle real-world issues of retention, and promote student success.

1. Introduction
The popularity of beginners’ Latin modules in UK universities is a testimony both to the continuing appeal of classical subjects to British undergraduates and the readiness of universities to cater for those with little or no previous exposure to classical languages. UK-wide, beginners’ Latin modules regularly attract over 800 undergraduate registrations annually, a common aim of these courses being to lay the foundations for student engagement with the linguistic thought world of the Romans and Latin’s rich literary traditions. Yet while many students successfully meet the challenges of studying their beginners’ Latin modules, a significant number do not. A 2014 survey of beginners’ Latin teaching in UK universities revealed that a striking number of undergraduates – 235 or 23% of the 1044-strong student cohort for which data was collected – either withdrew from or failed their beginners’ Latin module (Lloyd and Robson 2018, 8). This was a striking finding and one we were determined to investigate further.

The current paper is the result of a project begun in 2019 specifically dedicated to interrogating this statistic, our aim being to examine the factors that contribute to success, failure and withdrawal amongst Latin beginners in UK universities with a view to identifying potential strategies to improve student retention and success.
success rates. To this end, we collected data from Latin instructors across the UK to enable us to consider a broad range of variables such as class size, contact time, and assessment methods in an attempt to understand what distinguishes modules with high levels of student success (e.g. the 100% pass rates recorded in five institutions) from those that perform less well by this measure (i.e. the pass rates of 50% and under reported in five others). To anticipate our conclusions, our study would suggest that there is no single, readily amendable factor underpinning student success – and therefore no quick fix to help instructors solve the difficulties which many students encounter when learning Latin for the first time. However, an important way in which this paper serves to inform and advance debates about university-level Latin teaching is through its systematic presentation and analysis of a significant amount of quantitative data relating to factors that might have been expected to influence success. Our surveys were distributed to instructors via a link to an online form in January and February 2019. By July 2019, when we closed the survey, we had received responses from 29 out of the 31 UK institutions offering beginners’ Latin, teaching a total of 888 students between them. Our hope is that our analysis of the data informs research in this field not only by suggesting which factors have greater or lesser potential to account for variations in student outcomes in beginners’ language modules, but also by exploring the extent to which statistical data can advance understanding of the issue of student success.

This article is structured as follows. The first section outlines the methods used in our research, articulating the ways in which our quantitative data were analysed. In the second section, we move on to presenting and examining the results of our survey, using statistical techniques to explore the extent to which different factors (such as module size, textbook and assessment methods) impact on student outcomes. Finally, we present our conclusions and their implications for university teaching practices and for further research.

2. Methods

In order to explore the factors influencing student outcomes in university-level beginners’ Latin courses, we initially determined three metrics for measuring aggregated outcomes for students on each university module:

- The proportion of students starting the course who passed it, either on first attempt or as a resit (starter pass rate);
- The proportion of students completing the course who passed it, either on first attempt or at a resit (completer pass rate);
- The proportion of students who withdrew from the module before the final examination or equivalent (withdrawal rate).

As well as gathering data from which to calculate these pass and withdrawal rates, we also collected information on a range of factors such as: class size, contact hours, course duration, assessment methods and textbooks. These data subsequently allowed us to undertake statistical investigations of links between these factors and our three-outcome measure (the starter pass, completer pass and withdrawal rate).

Our next task was to investigate other factors that might influence our three outcome measures. For this we used a combination of data tables, bubble graphs (a type of scatter diagram that shows multiple coincident points by using circles with areas in proportion to the number of points) and correlation coefficients to look for factors that might be said to account for some of the variability in outcomes. For the sake of clarity and consistency, when creating data tables and graphs, we chose to privilege the starter pass rate, judging this to be the single most revealing measure of student success, though when exploring relationships between non-numerical variables (such as assessment methods) and outcomes, we used actual numbers passing, failing and withdrawing to represent outcomes. The outcomes and factors considered are shown in Figure 1.
In addition to using statistical methods to examine relationships, we also looked for statistical patterns by considering the outcome values for particular groups, e.g. the percentage of students across institutions passing and withdrawing who were taught in similar class sizes, used the same textbook, and so on.

3. Results

The returns from our survey give the aggregate figures for student outcomes shown in Table 1. As stated above, these are based on returns from 29 universities covering a total of 888 students.

In this table, we provide figures which both include and exclude the large number of students who were studying Latin at the Open University, the UK’s largest distance-learning institution. This is because the OU’s distinctive pedagogic approach is largely at variance with teaching practice at other UK institutions, making direct comparisons between OU and non-OU students problematic (see further Lloyd and Robson 2019).

Table 1 shows that the 2014 figure of 23% withdrawal or failure across all UK universities has barely changed, as only 78% of starters in the 2019 survey successfully completed their first module. We now investigate outcomes and influencing factors at university module level.

3.1 Performance measures across institutions

An important principle underpinning our research project has been the preservation of the anonymity of the universities covered by our survey. To this end, in our reporting each institution has been given either an alphanumeric code (Universities A1-A5) or a code comprising a single letter (Universities B-Z). These codes have been assigned on the basis of each institution’s position in the Table 2 below.

This table primarily orders universities from A1 to Z according to the starter pass rate (i.e. the percentage of students initially enrolled who passed the module), with those achieving 100% all coded

Table 1. Starter pass rates, completer pass rates and withdrawal rates in 2019 survey.

<table>
<thead>
<tr>
<th></th>
<th>Starter pass rate</th>
<th>Completer pass rate</th>
<th>Withdrawal rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td>76% (676 out of 888)</td>
<td>89% (676 out of 757)</td>
<td>15% (131 out of 888)</td>
</tr>
<tr>
<td>All students excluding OU</td>
<td>78% (568 out of 731)</td>
<td>88% (568 out of 649)</td>
<td>11% (82 out of 731)</td>
</tr>
<tr>
<td>OU students</td>
<td>69% (108 out of 157)</td>
<td>100% (108 out of 108)</td>
<td>31% (49 out of 157)</td>
</tr>
</tbody>
</table>
Where the starter pass rate was identical, the completer pass rate was then taken into account to determine the relative order. Where there was still a tie, the raw number of students was taken into account, with higher student numbers taking precedence. Finally, where all figures were equal, as in the case of A4 and A5, the codes were randomly assigned.

Table 2 also provides data on the percentage of students who withdrew before the final exam (or equivalent), as well as the raw numbers of students who started (S), completed (C) and passed (P) the module. Instructors on modules that run for a full year reported on their 2017–2018 cohort (thus providing the most recent set of results), while those on modules running for a semester or less reported on their 2018–2019 cohort. One institution had two distinct cohorts of students, each taught using a different textbook and different teaching methods. These cohorts have been kept separate in this report, with the result that there are 30 codes covering 29 universities. Figure 2 illustrates these results in the form of a percentage bar chart.

The assignment of codes in this way has the advantage of allowing readers to gain an immediate sense of the level of student success in any given institution, which can in turn provide a convenient way to assimilate information provided in many of tables in this article (for instance, when we learn that the Universities A2, A3 and A5 all provide three contact hours per week for their beginners’ Latin students, we might conclude that this amount of teaching has the potential to be highly effective). These codes should not, however, be seen as rankings in a league table. For one thing, the ‘success measure’ used (i.e. the percentage of starters passing the module) is somewhat arbitrary: ordering universities by reference to the success of those completing the module (the third column in Table 2) or retention rates (fourth column) would give very different results. And as can be seen from the raw numbers provided in the right-hand column, the withdrawal or failure of just one or...
two students can radically affect an institution’s position (in each of Universities B to D, for example, only a single student withdrew or failed – something also true of University Z!). It is also worth remembering that these figures are merely a snapshot of one year’s or one semester’s teaching: institutions’ statistics can vary radically from year. Importantly, too, universities work within a wide variety of frameworks, with hugely varied numbers and types of students and different instructors pursuing a range of diverse pedagogical objectives.

An important consideration to raise at this point is what the consequences are for a student failing or withdrawing from a beginners’ Latin module in the UK. Practice seems to vary from institution to institution, but available strategies include: the award of a ‘compensatable fail’ (where degree regulations allow a student to fail a limited number of credits); the transfer of a student to another module (in the case of a withdrawal) or the requirement to take an additional module (in the case of a failure); the awarding of partial credit if the student has successfully completed certain assessment elements, and so on. Yet while failure or withdrawal will often have negative consequences for students (e.g. by requiring them to undertake additional work, to change to a non-linguistic degree programme or to perform better on their other modules to compensate for poor performance), it need not necessarily prevent a student from successfully completing a degree. We also found in discussion with tutors that it is not always possible to withdraw from a module and that, where students are lost to a module, they may in fact have left the university altogether. In short, attributing retention to factors specific to a given Latin module is not unproblematic.

Our anonymity rule is honoured in the breach by the identification (with permission) of University Q, i.e. the Open University. This is partly to allow us, where appropriate, to exclude from our analyses the large numbers of students taking beginners’ Latin at the OU to avoid statistics being skewed in an unhelpful way. This decision also reflects the focus of our study, namely beginners’ Latin as taught in predominantly face-to-face institutions – although, of course, Open University figures do occasionally provide an instructive point of comparison. Note that all the data presented in this paper relate to a pre-CoVid world, where face-to-face, classroom-based teaching was very much the norm.

### 3.2 Factors influencing outcomes

As we have seen, the pass, failure and withdrawal rates of students on beginners’ Latin modules differ greatly between institutions, but what factors might account for these differences?
In this section, we present the results of a series of statistical analyses based on our data, looking at six key variables: module duration, credit value, contact hours, class size, textbook and assessment type (including use of dictionaries). As we shall see, no single factor provided a wholly reliable predictor of student success. In the discussion that follows, however, the six factors analysed are presented broadly in order of what seemed to us the least to most promising as influencers of the level of student success as measured by our three outcomes. The analysis of each factor is accompanied by a data table plus, for the sake of economy of presentation, a single bubble diagram illustrating its effect against the key metric of the ‘starter pass rate’.

It should be said at this stage, that other, potentially influential factors were less straightforward to take into account. One of these is the extent to which Latin was a compulsory, expected, or purely optional element of the students’ degree programme. Most classes comprised a mixture of students on different degree programmes (or at different stages of the same programme, where non-first years were permitted to study beginners’ Latin), so respondents often felt unable to provide meaningful answers to this question when asked in our survey. Other factors which we were similarly unable to pursue were the extent to which students’ previous exposure to Latin and their previous educational achievements mapped on to outcomes: this level of granularity was simply impossible to obtain. That said, it is worth stating that while a minority of students may have studied some Latin in school, all the students in our survey had been placed in beginners’ modules by their universities. Furthermore, earlier work by Lloyd comparing students’ outcomes in Latin modules with the average grade offered for the degree programmes they were studying showed no discernible correlation between prior educational achievement and student success (Lloyd 2017, 168).

### 3.2.1 Module duration

To begin with the length of time over which a module is taught, this factor seems to have relatively little effect over student pass and retention rates. As Table 3 shows, of the 30 modules captured in our survey, 17 were taught over one semester (428 students) and 12 over the course of a full year (450 students; 293 excluding the Open University), with one institution offering a five-week intensive module (10 students).

The aggregate pass rates for starters on single-semester and full-year modules were broadly similar at 76% (327 students) and 79% respectively (excluding the Open University), with withdrawal rates also comparable at 11% (45 students) and 13% (37 students). Pass rates for completers were slightly more divergent at 85% for single-semester and 90% for full-year modules. Interestingly, the single, five-week intensive module offered by University A4 could boast excellent pass and completion rates of 100%. Whilst it would, of course, be inappropriate to draw any conclusions from a single example of such a module with only 10 students, it would nevertheless be interesting to know whether this intensive model could be made to work as effectively elsewhere.

Table 3, the bubble diagram in Figure 3 and correlation coefficients all show that course duration exerts little or no influence on the starter pass rate.

### Table 3. Pass rate of starters and completers and withdrawals rate by module length.

<table>
<thead>
<tr>
<th>Module length</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/ Start %</th>
<th>Pass/ Complete %</th>
<th>Withdraw %</th>
<th>Actual student numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 weeks</td>
<td>1</td>
<td>A4</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>10 10 10</td>
</tr>
<tr>
<td>Full year</td>
<td>11</td>
<td>A1, A3, B, C, D, K, M, P, S, Y, Z Q</td>
<td>79</td>
<td>90</td>
<td>13</td>
<td>293 256 231</td>
</tr>
<tr>
<td>Open University (full year)</td>
<td>1</td>
<td>Q</td>
<td>69</td>
<td>100</td>
<td>31</td>
<td>157 108 108</td>
</tr>
</tbody>
</table>
3.2.2 Credit value

The number of credit points assigned to each module also seems to have little impact on student success. The vast majority of modules – 27 of the 30 surveyed – had a credit value of either 15, 20 or 30 CATS/SCOTCATS points (ostensibly equating to 150, 200 and 300 total study hours respectively: in the UK, full-time students normally study modules to the value of 120 CATS points each year). As Table 4 demonstrates, these modules displayed relatively minor differences in performance. The most interesting difference is evident in withdrawal rates, since the 20-credit modules in which the majority of students in conventional universities were taught (406 out of a total cohort of 731) could boast a withdrawal rate of 8% (compared with rates of 21% in 15-point modules and 15% for 30-point modules). However, the numbers for the 15- and 30-point groupings are relatively small and no statistically significant difference can be claimed here. In any event, what was gained in retention was partly lost in student attainment, since the pass rate of students completing 20-credit modules was slightly lower than those on 15- and 30-point modules (85% compared to 88% and 89% respectively). Noteworthy, too, is the relatively low pass rate for starters on 15-credit modules (70%) and that the very highest performing modules (i.e. A2, A3, A4 and A5) were more likely to have a credit value of either 20 or 30 CATS points.

Two universities had more heavily weighted modules. The single 40-point module taught at University B could boast an excellent success rate, with 97% of students (34 out of 35) completing and

<table>
<thead>
<tr>
<th>Credit value (CATS/SCOTCATS) points</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/Start %</th>
<th>Pass/Complete %</th>
<th>Withdraw %</th>
<th>Actual student numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>5</td>
<td>G, H, R, V, W</td>
<td>70</td>
<td>88</td>
<td>21</td>
<td>116 92 81</td>
</tr>
<tr>
<td>30</td>
<td>7</td>
<td>A3, A5, C, D, S, Y, Z</td>
<td>75</td>
<td>89</td>
<td>15</td>
<td>158 134 119</td>
</tr>
<tr>
<td>40</td>
<td>1</td>
<td>B</td>
<td>97</td>
<td>100</td>
<td>3</td>
<td>35 34 34</td>
</tr>
<tr>
<td>60</td>
<td>1</td>
<td>Q</td>
<td>69</td>
<td>100</td>
<td>31</td>
<td>157 108 108</td>
</tr>
</tbody>
</table>

**Table 4.** Pass rate of starters and completers and withdrawal rate of module by credit value.

![Figure 3. Bubble diagram plotting starter pass rate against module duration (area of bubble represents number of universities).](image)
passing the module, while the 60-credit module of the Open University (University Q) also enjoyed a strong pass rate for completers of 100%, but scored less well in terms of retention, with 31% of students withdrawing (49 out of 158). While aspects of the performance of these latter two modules are certainly positive, the absence of a further comparative data should urge caution when it comes to drawing any firm conclusions about the effects of heavy credit weightings.

Figure 4 plots the pass rate for starters against the various module credit values in the form of a bubble diagram. Inspection of the diagram and calculation of correlation coefficients do not suggest that credit points for the module influence pass rates.

3.2.3 Contact hours
The number of weekly contact hours offered to students is one factor where the data point in a more definite direction, with modules offering very high numbers of contact hours tending to produce better student outcomes. The four institutions that provided students with five or more contact hours a week could boast excellent completion and pass rates: of the 72 students benefiting from five hours of tuition per week, only one withdrew and 67 out of 72 of starters passed (93%: Universities E and H); more strikingly still, 100% of the 26 students benefitting from over five hours’ teaching both completed and passed their modules (Universities A1 and A4). At the other extreme, students offered either 1.5 or 2 hours of tuition (a total of 73 students across five institutions) were the most likely to withdraw, i.e. 25% or 18 students; this compares to an average of 11% of students on modules in conventional universities offering three or four hours of teaching (63 out of 561 students). (Owing to its non-standard teaching model, which sees students largely study independently, the Open University has not been included in this section.)

While these data might suggest that students are more likely to succeed when more teaching is offered, it is important to note that this is not consistently the case. Indeed, when it comes to pass and completion rates for modules providing three or four hours of teaching – which between them account for 20 of the 30 modules surveyed – a surprising result emerges, namely that a higher proportion of students succeeded when offered less teaching. Of those benefitting from three hours of
teaching a week, 83% of starters passed (172 out of 206) and just 7% withdrew (12), compared with
71% of starters passing and a 14% withdrawal rate for their four-hour-a-week peers (253 and 49 stu-
dents out of 355 respectively). Could it be the case for these modules that less is more? Possibly, but
it is perhaps more plausible that other factors are at play and, if there is a lesson to be learnt here, it is
probable that the statistical data should be treated with a degree of caution, particularly when some
categories contain very few universities. Further statistical analysis also suggests that we should be
wary of making a simple equation between high numbers of contact hours and strong student
results: while the linear coefficient is the strongest observed in this project, it is nevertheless not sig-
nificantly high in statistical terms. That said, it is no doubt worth repeating that strong pass rates and
low withdrawal rates are consistently seen for those with the highest number of teaching hours per
week (A1, A4, E and H), as Table 5 and the bubble diagram in Figure 5 show.

### 3.2.4 Class size

The next factor we consider is class size. Of course, cohort size and class size are not necessarily the
same thing: indeed, the majority of institutions choose to divide their students into multiple groups
for some or all of their teaching and many teach undergraduates (who were included in the 2019

<table>
<thead>
<tr>
<th>No of hours</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/ Start %</th>
<th>Pass/ Complete%</th>
<th>Withdraw %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>1</td>
<td>M</td>
<td>80</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>K, V, W, Z</td>
<td>67</td>
<td>89</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>A2, A3, A5, C, D, F, G, S, U</td>
<td>83</td>
<td>90</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>E, H</td>
<td>93</td>
<td>94</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 +</td>
<td>2</td>
<td>A1, A4</td>
<td>100</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5. Pass rate of starters and completers and withdrawal rate of module by contact hours per week.

![Figure 5. Bubble diagram plotting pass rate of starters against contact hours.](image-url)
survey) alongside postgraduate beginners (who were not). The most common class size in face-to-face contexts is 15–19 students (10 modules), followed by 10–14 (eight modules). Interestingly, six out of the 29 modules in this survey were taught to classes of 25 and over.

Instinctively, one might expect students in larger classes to fare less well than those taught in more intimate groups, but the data reveal a mixed picture here. On the one hand, large class size seems to have no negative bearing on student retention (indeed, the withdrawal rate for students taught in classes of 25 or more is only 10% compared to an average of 12% amongst those taught in classes of under 20: 63 students out of 539). But on the other hand, a small impact is perhaps visible on the student pass rates of these large classes, which at 74% for starters and 83% for completers are several percentage points below the averages for institutions with smaller classes, which are 79% (starters: 425 out of 539 students) and 89% (completers 425 out of 476) respectively. These data are laid out in Table 6 and Figure 6.

3.2.5 Textbooks

One area where the data threw up some noteworthy findings was in the area of textbooks. *Wheelock* and *Reading Latin* remain the big two beginners’ textbooks in the UK, with *Wheelock* used at 5 institutions with a total of 155 enrolled students and *Reading Latin* taught at 6 institutions to a total of 154 students (with Universities A1 and A4 also using it in conjunction with other materials, boasting

<table>
<thead>
<tr>
<th>Class Size</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/ Start %</th>
<th>Pass/ Complete %</th>
<th>Withdraw %</th>
<th>Actual student numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>5–9</td>
<td>5</td>
<td>A1, A2, M, W, X</td>
<td>76</td>
<td>89</td>
<td>15</td>
<td>66 56 50</td>
</tr>
<tr>
<td>15–19</td>
<td>10</td>
<td>A4, A5, B, D, I, L, N, R, U, V</td>
<td>78</td>
<td>90</td>
<td>14</td>
<td>259 223 201</td>
</tr>
<tr>
<td>20–24</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- - -</td>
</tr>
<tr>
<td>25+</td>
<td>6</td>
<td>E, G, J, O, T, Y</td>
<td>74</td>
<td>83</td>
<td>10</td>
<td>192 173 143</td>
</tr>
</tbody>
</table>

Figure 6. Pass rate of starters and completers and withdrawals rate of module by class size (Q omitted).
a further 26 students between them). Other textbooks taught at more than one institution include Learn to Read Latin (3 HEIs: 96 students), Veni, Vidi, Vince! (2 HEIs: 63 students) and So You Really Want to Learn Latin (2 HEIs: 54 students). Instructors from a number of universities (including some of those using the textbooks discussed here) supplemented the teaching of one textbook with material taken from another.

While the number of students is relatively small for all but the big two, Table 7 nevertheless shows some striking differences between the pass rates of starters and completers as well as withdrawal rates in institutions where different textbooks are used. The performance of Veni, Vidi, Vince! is particularly strong, with only one student out of a total of 63 withdrawing and impressive pass rates for both starters (92%) and completers (94%). Pass rates for completers were also strong where Learn to Read Latin (85%) and, in particular, So You Really Want to Learn Latin (97%) were taught – although withdrawal rates were also high at 22% and 28% respectively (21 out of 96 and 15 out of 54). The poorest pass rates were achieved by Reading Latin students (only 63% of starters and 76% of completers passed the module) – yet it is worth noting here that one Reading Latin institution could boast a 100% pass and retention rate (A5), as could those universities using Reading Latin in conjunction with other materials (A1 and A4). Indeed, if these two universities are included in the Reading Latin statistics, the pass rates rise to 68% (123 out of 180 starters) and 80% (123 out of 153 completers) while the withdrawal rate falls to 15% (47 students). These data are laid out in Table 7 and Figure 7.

It is worth stating that our analysis showed no clear link between the stage of a textbook reached and the pass rates of students at a given institution. Indeed, University E, where students covered more ground in Wheelock than elsewhere, had the highest pass rates (95% for starters; 98% for completers) and the lowest withdrawal rate for this textbook (just 2%), whereas University U, which covers significantly less ground in Reading Latin than elsewhere, had the lowest pass rate for completers (65%), the second lowest pass rate for starters (52%) and the second highest withdrawal rate (21%) amongst those institutions using it. Counterintuitively, perhaps, based on this small dataset, less coverage does not seem to equate to more students passing.

### 3.2.6 Assessment

The vast majority of modules were assessed by a combination of methods, with marks split across a final examination, in-course tests and, in the case of ten modules in our survey, ‘other assessed coursework’. Only four universities boasted a final examination weighted 75% or over, namely Universities B and G (100% examination), S (80%) and T (75%). The same number of universities had either no examination or one weighted at under 25%, namely Universities A2 (25% examination), and F, H and V (where students’ marks derived solely from in-course tests and/or other assessed coursework). The data is complex to interpret here, but there seems to be no clear relationship between the weighting of the examination and examination success.

Figure 8 represents the assessment strategies of Universities A1–Z in visual form. Bars are labelled by university code in decreasing order of starter pass rate. The bars themselves show the percentage of the final mark made up of an end-of-module examination, in-course tests and other assessed coursework.

### Table 7. Pass rate of starters and completers and withdrawals rate of module by textbook used.

<table>
<thead>
<tr>
<th>Textbook</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/ Start %</th>
<th>Pass/ Complete %</th>
<th>W/d %</th>
<th>Actual student nos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powell, Veni, Vidi, Vince!</td>
<td>2</td>
<td>C, J</td>
<td>92</td>
<td>94</td>
<td>2</td>
<td>63 62 58</td>
</tr>
<tr>
<td>Wheelock</td>
<td>5</td>
<td>E, O, R, T, W</td>
<td>74</td>
<td>81</td>
<td>9</td>
<td>155 141 114</td>
</tr>
<tr>
<td>Oulton, So You Really Want to Learn Latin</td>
<td>2</td>
<td>K, V</td>
<td>70</td>
<td>97</td>
<td>28</td>
<td>54 39 38</td>
</tr>
<tr>
<td>Keller &amp; Russell, Learn to Read Latin</td>
<td>3</td>
<td>H, N, Y</td>
<td>67</td>
<td>85</td>
<td>22</td>
<td>96 75 64</td>
</tr>
<tr>
<td>Jones and Sidwell, Reading Latin</td>
<td>6</td>
<td>A5, P, S, U, X, Z</td>
<td>63</td>
<td>76</td>
<td>18</td>
<td>154 127 97</td>
</tr>
</tbody>
</table>
There is no clear pattern associating proportions of assessment types making up final results and starter pass rate. As can be seen, there are bars indicating a high proportion for final examination contribution on the left (e.g. B and G) and further right (e.g. S and T) and bars with high proportions of other assessed coursework both on the left (A2) and right (Q and V). In a similar vein, high proportions of marks from in-course tests can be seen across the table: A4, F, H, P, U, V and Y.

Because Figure 8 did not show any clear links between proportions of assessment type and university pass and withdrawal rates, each assessment type was also considered separately in relation to the three outcome measures (starter pass rate, completer pass rate and withdrawal rate), with universities categorised depending on whether they did or did not use each assessment type. Table 8 shows the outcomes for universities that did (Yes) or did not (No) use a final examination, in-course tests, or other assessed coursework.

![Figure 7](image1.png)

Figure 7. Bubble diagram plotting pass rate of starters against textbook used.

![Figure 8](image2.png)

Figure 8. Beginners’ Latin modules listed in alphanumeric code order, showing percentages of different assessment types that contribute to final mark.
Grouping modules in this binary way throws up some interesting results, to be sure – such as a slightly stronger average starter pass rates on those few modules that do not have a final examination (81%) compared to those that do (77%; however, the withdrawal rate was also slightly higher on non-examined modules at 14% compared to 11%). More surprising, perhaps, is the markedly stronger performance by modules that do not use in-course tests as part of their assessment strategy (98% starter pass rate; 1% withdrawal) when compared to those that do (75% starter pass rate; 13% withdrawal). Indeed, statistical testing provides a significant result here, showing a proven relationship between the use or non-use of in-course tests and student outcomes ($\chi^2(2, N = 731) = 24.2375$, $p = 0.00001$; the chi-square statistic is 24.2375; and the $p$-value is 0.00001: the result is therefore significant at $p < .05$.) Importantly, however, the sample of modules which do not to employ in-course tests is small (just five institutions in total).

A large number of students were reported as taking modules that used ‘other assessed coursework’ as a means of testing. These assessment elements – which included assignments based on original sources, the comparison of texts and translations, and tutorial or class participation – were used by nine of the face-to-face institutions in our survey (as well as the Open University). As Table 8 shows, the inclusion of ‘other assessed coursework’ had a positive impact on student performance and statistical testing for a relationship between student outcomes and the inclusion (or non-inclusion) of this type of assessment proved significant (the chi squared test here yields a significant result, indicating a relationship between use of other assessed coursework and student outcomes ($\chi^2(2, N = 731) = 9.7011$, $p = 0.007824$)). The aggregated starter pass rates for universities using ‘other assessed coursework’ was relatively high: 85% compared to the 75% figure for the 19 universities where this assessment type was not included. And withdrawal rates were also low: 7% compared to the 13% withdrawal rate for universities not using this assessment type (indeed, for eight of these universities, the withdrawal rate was 0-3%). At the Open University (omitted from this table and from statistical testing), where 50% of the final result derived from ‘other assessed coursework’, the starter pass was relatively low (69%) and the withdrawal relatively high (31%), but there was nevertheless a very strong completer pass rate (100%).

The question these statistics beg is what the cause and effect might be here. Various considerations are no doubt at play, but it seems plausible that less linguistically confident students perform better on assessment tasks completed outside examination conditions and/or which are less reliant on memory. Conceivably, too, active intervention in the assessment design of a module provides an opportunity for instructors closely to tailor their teaching to the needs, interests and abilities of a particular student body. In the design of bespoke assessment tasks, there are perhaps opportunities to integrate language development more effectively with other aspects of students’ studies, too, thus providing additional motivation for students who might otherwise struggle to see the relevance of learning Latin to their broader study goals.

Table 8. Comparison of pass and withdrawal rates for universities with and without a final exam (Open University omitted).

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>No of HEIs</th>
<th>Universities</th>
<th>Pass/Start %</th>
<th>Pass/Complete %</th>
<th>Withdraw/Start %</th>
<th>Actual student numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Examination: No</td>
<td>4</td>
<td>A4, F, H, V</td>
<td>81</td>
<td>94</td>
<td>14</td>
<td>83 71 67</td>
</tr>
<tr>
<td>In-course Tests: No</td>
<td>5</td>
<td>A1, A2, A5, B, G</td>
<td>98</td>
<td>99</td>
<td>1</td>
<td>91 90 89</td>
</tr>
<tr>
<td>Other assessed coursework: Yes</td>
<td>10</td>
<td>A1, A2, A5, E, H, J, L, V, W, Z</td>
<td>85</td>
<td>92</td>
<td>7</td>
<td>210 195 179</td>
</tr>
</tbody>
</table>
3.2.7 Use of dictionaries

As part of our project, the authors also asked instructors to provide a copy of the module’s examination paper. While we could detect no clear patterns here (e.g. prepared translation or certain types of grammatical or vocabulary questions being connected with high student success rates), it is nevertheless noteworthy that some of the strongest performing modules in our survey were those that permitted the use of dictionaries in the final examination (five in total: A2, A4, A5, C and U). The average pass rate for starters for these five institutions was 82% for starters (80 out of 97 students) and 90% for completers (89 students), with the withdrawal rate also low at 8%. Analysis of the examination papers set by these institutions generally reveals that the dictionaries were conceived as an active tool for approaching (sometimes complex) unseen Latin texts, with their permitted use in examinations therefore probably best seen as a symptom of an instructor’s conscious efforts to experiment pedagogically and not simply a way of providing weaker students with a prop. This perhaps forms part of a broader picture where the bespoke tailoring of assessment by instructors (e.g. in the form of ‘other assessed coursework’ or active dictionary work in examinations) often – though not always – goes hand in hand with strong pass and/or retention rates. However, the contrary is also true: impressive success rates are also in evidence in modules where no such innovations in assessment were in place.

4. Conclusions

Our overarching conclusion, after substantial number crunching, is that there is no single and simple way to address the problems of failure and withdrawal among students taking beginners’ Latin at university – no magic formula that can be used to ensure that all students successfully complete their beginners’ module. But this is not to say that the data presented in this paper do not provide useful pointers. Certainly, our analysis seems to show that some factors, such as module length and credit weighting, have no statistically demonstrable impact on student outcomes. Yet despite the occasionally small statistical samples on which results are based, other factors provide important food for thought. For example, we saw that a high number of contact hours, the use of certain textbooks, and the inclusion of ‘other assessed coursework’ are often associated with strong student outcomes – and these are therefore observations that instructors looking to improve student performance might usefully consider. Yet it is also important to bear in mind that for each of these factors there are plenty of exceptions to the rule, with modules employing a low number of contact hours, a ‘weaker’ textbook, or more traditional forms of assessment also capable of producing strong pass and retention rates. Rather than any of these factors being determinative in and of themselves, then, it might be truer to say that for any given module and/or cohort a complex series of interactions is in play which resist simple measurement.

In summary, then, statistical analysis can play the important role of ruling out some factors and foregrounding others as the variables that an instructor or institution might reasonably think about altering should they need to work on improving students’ outcomes on their beginners’ Latin module. We hope, too, that our methodology and findings will be of interest to researchers looking at student success on other beginners’ language modules, not least as the authors could find no evidence of similarly ambitious cross-institution statistics-driven work being undertaken in the field of MFL. Although there are publications reporting on the falling uptake on Modern Foreign Language programmes at university level (e.g. Worton 2009), and interest in surveying and supporting the teaching of specific languages in UK universities (e.g. Bavendiek et al. 2022 whose focus is beginners’ German), we believe that this paper is unique in exploring the effects of pedagogical factors on a particular module-type – in this case, beginners’ Latin – across a substantial group of universities. We also hope that our work will provide a useful point of contrast and comparison with studies which aim to quantify and/or analyse student dropout from language classes in particular contexts (e.g. Brem 2021 and Javadi Safa, Mavini and Esfandiari, 2022) or from university-
level degree programmes in general (e.g. Tino 2015; Casanova et al. 2018; see, too, the data on student non-continuation published on the website on the Higher Education Statistics Agency (HESA)).

Clearly there is further work to be done on mapping the factors that underpin student success on university-level Latin modules. An obvious next step here is the work that the authors of the current paper have already undertaken which involves interviewing instructors and students in order to gain a better, evidence-based understanding of the perceived challenges of Latin acquisition and the strategies that teachers and learners use to overcome these. The qualitative data we captured in these interviews ultimately show the importance for any given module and/or cohort of students of the relationship between the instructor (and their preferred pedagogical approach) and the students (and their preferred learning approach), with the textbook and class dynamic both inside and outside the classroom also forming a crucial part of the mix (Lloyd and Robson 2023). While there is no silver bullet to solving problems of student withdrawal and retention, both quantitative and qualitative methods clearly play an important role in allowing researchers, instructors and students alike to understand better the problems involved and the ways in which these might be addressed. Our research shows that helping students to achieve their Latin learning goals is a multifaceted challenge – but with nearly a quarter of UK university students failing to complete their beginners’ Latin module successfully, the battle for clearer understanding and better outcomes was never more worth fighting.

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Declaration of interest statement
The authors report that there are no relevant competing interests to declare.

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References

Appendix

1. Questions from tutor survey covered in this report

1. Nature of beginners’ Latin module
Total credit for module (please give CATS equivalent; NB 10 CATS = 10 SCOTCAT = 5 ECTS)
 o 10 CATS points
 o 20 CATS points
 o 30 CATS points
 o 40 CATS points
 o 50 CATS points
 o 60 CATS points
 o Other (please specify)

2. Over what period of time is this module normally studied?
 o Half a year (i.e. one term or semester)
 o Full year (i.e. 2/3 terms or 2 semesters)
 o Other (please specify)

3. How many contact hours (to the nearest hour) are there per week for this module?
 o 1 h
 o 2 h
 o 3 h
 o 4 h
 o 5 h
 o Other (please specify)

4. Please complete the table for undergraduate students enrolling on this module for the most recent year for which you have data.

<table>
<thead>
<tr>
<th>How many students enrolled on the module?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many students took the final exam (or equivalent)?</td>
</tr>
<tr>
<td>How many students passed the module (including those who passed on resit)?</td>
</tr>
</tbody>
</table>

5. To which academic year do the results above and your other responses relate?
(All responses should relate to the most recently completed beginners’ Latin language module).
 o 2018–2019
 o 2017–2018
 o Other (please specify)

6. In some institutions the cohort is divided into a number of groups for teaching. Please indicate how many teaching groups there are for this module:
7. Please estimate the average class size for groups taking this module:

- 1–4
- 5–9
- 10–14
- 15–19
- 20–24
- 25 or more
- Other (please specify)

**Module content**

8. Which of the following course books are used on the beginners’ Latin module(s) at your university? Please tick all textbooks whose use makes a substantial contribution to the teaching of this module.

- Jones & Sidwell, Reading Latin
- Cambridge Latin Course Books (CSCP)
- Oxford Latin Course Books
- Betts, Teach Yourself Latin
- Wheelock, Latin: An Introductory Course
- Keller & Russell, Learn to Read Latin
- Powell, Veni Vide Vince!
- Other (please specify)

**Module assessment**

9. How is the beginners’ Latin module assessed?
Tick as many as appropriate to cover assessment methods for this module.

- Final examination
- In-course tests
- Other assessed coursework

10. Please list any other forms of assessment used in this module.

11. What proportion of the total marks for the module does each assessment component carry? (%)

12. Is the use of dictionaries allowed in exams or other assessments for this module?

- No
- In exams only
- In other assessments only
- In both exams and other assessments