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Placing the library at the heart of plagiarism prevention: the University of Bradford experience.
Sarah George, Anne Costigan and Maria O’Hara

Abstract
Plagiarism is a vexed issue for Higher Education, affecting student transition, retention and attainment. This paper reports on two initiatives from the University of Bradford library aimed at reducing student plagiarism. The first initiative is an intensive course for students who have contravened plagiarism regulations. The second course introduces new students to the concepts surrounding plagiarism with the aim to prevent plagiarism breaches. Since the Plagiarism Avoidance for New Students course was introduced there has been a significant drop in students referred to the disciplinary programme. This paper discusses the background to both courses and the challenges of implementation.

Introduction
Plagiarism, once the esoteric concern of ivory-tower academia, suddenly seems to have permeated public consciousness. It is a matter that topples politicians (Weber-Wulff), stalks journalists (O’Carroll) and musicians (BBC) and is a charge that has been levelled at figures as diverse as Mrs Beeton (Gray), Barack Obama (Zeleny) and Damien Hirst (Alberge). Despite or even because of this popular coverage, there is widespread confusion amongst students entering Higher Education around the world about the definition and scope of the crime (Neville, 29). Institutional strategies on introducing plagiarism range from the implicit, assuming that the students can learn generic skills by osmosis or instinct (Ashworth, Bannister and Thorne 196; Peach, 7) to the overbearing, issuing repeated threats about the consequences of plagiarism until terrified students feel they have to reference every sentence (Abasi and Graves, 230). Information on plagiarism often lurks unread on institutional websites and in guidelines and is introduced in the vaguest terms to new students, who have many other concerns besides learning to reference (Gullifer and Tyson, 471). This paper reports on two initiatives from the University of Bradford library. The Plagiarism Avoidance for New Students (PANS) course attempts to smooth the transition into Higher Education by introducing students to ideas of referencing and plagiarism in a timely and non-threatening manner. This grew out of the University of Bradford’s Plagiarism Awareness Programme (PAP), which seeks to address plagiarism breaches in a firm but non-punitive fashion.

Literature review
Although this paper concentrates on the UK, there is an extensive literature on the subject of detecting and categorizing plagiarism in Higher Education from across the world: a brief literature search reveals recent studies from Austria (Teixeira and Fatima Rocha, 198-209), Australia (Bretag, 1-10; Handa and Fallon, 126-139; Gullifer and Tyson, 132-50), Bulgaria (Pupovac, Bilic-Zulle and Petrovecki, 13-9), Canada (Hughes and McCabe, 49-63), China (summarised in Liu, 234-41), Croatia (Mavrinac et al., 195-201; Pupovac, Bilic-Zulle and Petrovecki, 13-9), Egypt (Darrag, Yousri and Badreldin, 1-25), Finland (Seppänen), Ireland (Risquez, O’Dwyer and Ledwith, 34-43), Japan (Wheeler, 17-29), Malaysia (Lahur, 1-8), New Zealand (Marshall and Garry, 26-37; Walker, 41-59), Pakistan (Shirazi, Jafarey and Moazam, 269-273), Poland (Lupton, Chapman and Weiss, 231-5),
were seen as victimless, students did not consider practices that directly impacted on other students, such as copying another
argued that using facts or statistics determined by others was acceptable as these were merely
students acknowledged acknowledgement were unequivocally identified as plagiarism or acceptable
imperialism or "orientalism". It is generally accepted that verbatim copying and buying essays are breaches but other areas such as collusion,
more acceptable in Confucian cultures. Barrett and Malcolm (42) found that Chinese masters
The literature also finds much confusion as to what constitutes plagiarism. It is generally accepted that verbatim copying and buying essays are breaches but other areas such as collusion,

Students whose first language is not English (Non-English speaking background or NESB) are generally seen to be more at risk of plagiarising than native English speakers (Barrett and Malcolm, 39), as they may lack the vocabulary to be effective at paraphrasing (McGowan, 5). However, Marshall and Garry (27) claim that the plagiarism of NESB students may merely be more apparent due to noticeable leaps in fluency rather than actually being more frequent. There have been assertions (Hayes and Introna, 215) that students from a rote-learning culture are more likely to plagiarise but this view has also been questioned as being simplistic (Bretag, 2): analyses of Chinese text books have shown that they place equal emphasis on citation to their English language counterparts Liu,235-6). Liu (234-41) and Ha (76-8) robustly rebut the suggestion that plagiarism is more acceptable in Confucian cultures. Barrett and Malcolm (42) found that Chinese masters students who had taken their undergraduate degrees in China were significantly less likely to plagiarise than those who had taken their undergraduate degrees in the UK, which is an unlikely finding if cultural differences are to blame. Leask (190, 196) argues that all students face the "old game, new rules" culture shock when they enter tertiary education, and whilst this is likely to be more severe for international students, arguing that their culture is to blame smacks of cultural imperialism or "orientalism".
found that there is a disconnect between the seriousness of plagiarism as viewed by staff and students, and that the latter have not grasped the significance of appropriate attribution in the academic process. Many authors have found that referencing is introduced in a very negative light, and students fear consequences rather than understanding its purpose (Abasi and Graves, 228; Gullifer and Tyson, 476; Neville, 32; O’Hara, 7)

The Plagiarism Awareness Programme.
In 2008, the University of Bradford revised its process for breaches of the plagiarism regulations. It was becoming clear that an increasing number of cases were due to ignorance of plagiarism and referencing rather than deliberate cheating and education rather than punishment was seen as the appropriate response. The University’s Dean of Students asked the library to set up a course as a compulsory part of the formal disciplinary process. This became known as the Plagiarism Awareness Programme or PAP. There was no formal pilot of the PAP, as it was created rapidly in response to an urgent need to process plagiarism cases. It has, however, continually developed over the years.

Breaches of assessment regulations are handled by the Academic Quality Unit (AQU), who assure and enhance the standards of the university’s academic provision. Students who are found in breach of regulations on plagiarism are referred by the AQU to the Library for the PAP as well as other penalties which may include loss of marks and re-submission with a capped mark (University of Bradford Legal Services Team)

The PAP sessions are delivered by subject librarians to small groups of students in sessions lasting up to four hours. The sessions consist of a presentation followed by online exercises on referencing and plagiarism. The original course had to be compiled in a short time scale so utilised freely available online resources such as the UK LearnHigher plagiarism resource from London Metropolitan University (LearnHigher) and “Don’t cheat yourself” from the University of Leicester. This material did not exactly match Bradford’s institutional and departmental guidelines or our own pedagogic needs, so we gradually developed our own suite of Learning Objects delivered through the University’s Virtual Learning Environment (VLE), Blackboard. There are separate versions of the programme for the three main referencing styles used within the University, Harvard, Numeric and IEEE (University of Bradford Library). There is also a version for Distance Learners.

The Learning Objects cover:

- Student Views on Plagiarism from London Metropolitan University (LearnHigher); in which real students relate their experiences of plagiarism
- Plagiarism yes or no: a series of scenarios in which the student has to decide whether the examples are plagiarised
- A 10 question test on plagiarism
- Four interactive learning objects created using Glomaker (RLO-CETL) on referencing a book, a chapter from an edited book, a journal article and a website. These all include self-test sections.
- A referencing and citation exercise.

If a student fails to achieve the 70% pass mark in the test or if the subject librarian deems their performance on the referencing exercise to be unsatisfactory, the student is referred to the University’s Learner Development Unit (LDU) for further help and guidance (University of Bradford
Students can only take the PAP once, anecdotal evidence suggests that further offences are rare but realistically no programme is perfect. If a student who has completed the PAP commits another plagiarism breach the full severity of the regulations comes to bear.

By 2011, the PAP had been running for 3 years and we had amassed considerable evidence about its effectiveness. At the end of the session each student fills in a feedback form, some of the results of which are presented in figures 1 and 2. Also, the small size of the sessions allows the session leader to observe the students’ interactions with the online material and feed back about problem areas. The feedback forms from referred students show a high level of approval, with 97% rating it very or quite useful and the remainder neutral, with no negative ratings (Figure 1). We often find that students who have not been referred to the course try to attend because they have heard that the sessions are useful.

![Overall, how useful did you find your Plagiarism Awareness Programme](image)

**Figure 1: Data from the PAP feedback forms**

Qualitative comments from the feedback forms show that they find the course useful but that a number of students suggest that it should be delivered earlier in the course of study (figure 2) and to more students.
Drivers for development

As shown in the above figures, while the PAP was widely regarded as successful a number of issues had arisen. The University Learning and Teaching Committee were concerned about the number of appeals from students against breach convictions on the grounds that they had not been adequately informed about good practice in advance. The subject librarians delivering the programme felt that it was pedagogically unsatisfying to be curing the problem of plagiarism rather than attempting to prevent it in the first place. The disciplinary procedure often takes months, during which students are left in limbo and may easily plagiarise again. To address this problem, the librarians ran a series of drop-in workshops on the subject, and attempted to embed more instruction on plagiarism and referencing into degree programmes. In parallel, the LDU was running workshops and clinics on plagiarism and referencing. Despite all of these efforts, coverage was piecemeal, and large swathes of the student population were receiving no instruction. According to feedback forms from the PAP, 38% of students taking the course said they had not received any previous information.

In 2009 the library was asked by the Dean of Students to develop a short course on plagiarism avoidance which was embedded into a limited number of Blackboard areas but was not compulsory or widely adopted.

In 2010 we conducted a survey to which 703 students responded even though no inducements were offered and the survey was available for little over a month. The responses showed a high level of concern about plagiarism but also some serious misunderstanding of the concept (see Figure 3). For instance, many students believed quoting a well known fact without attribution to be plagiarism. A surprisingly small proportion considered collaborating with classmates on an individual assignment...
to be problematic. High numbers of students reported difficulties in many key areas such as when to paraphrase (358 respondents) and how to judge the acceptable length of a quote (258 respondents). (Figure 4)

In 2010, one of our Graduate Trainees conducted a study of the attitude of our international students towards plagiarism. She found that even UK students had no clear idea what constituted plagiarism but were aware of the concept and terrified of inadvertent breaches. She also found that uncertainty about how to reference sources such as videos often led students to omit the reference altogether. She concluded that the multiplicity of referencing styles at the University of Bradford (ten variants on Harvard, four different numeric styles and law, which is a hybrid style) caused great confusion (O'Hara,6). Whilst the Holy Grail of a university-wide referencing system is not in our gift, as a result of this research we developed clearer web pages explaining referencing and plagiarism (University of Bradford Library)

A further concern was the workload that the entire breach procedure imposed on staff from the academic schools, the library and the AQU which handled the process. Each PAP takes from 3-5 hours to run, and sessions are rarely run to more than 10 students. These concerns were discussed at managerial level and taken up by the Dean of Students
Which of the following would you consider to be plagiarism?

- Collaborating with classmates on an individual assignment
- Paraphrasing ideas from an article without acknowledging it
- Quoting the exact text of an article without acknowledging it
- Quoting well known facts, such as the date of the next Olympics, without acknowledging it
- Re-submitting one of your own assignments for another module
- Talking to classmates about an individual assignment
- Using anonymous material (that is, material with no apparent author) without acknowledging it
- Using ideas from an article without acknowledging it

Figure 3: Answers to the question "Which of the following would you consider to be plagiarism?" University of Bradford Plagiarism Survey 2010 (n=703)
Which of the following do you find challenging?

- Deciding the length of a quotation
- Deciding whether a reference is necessary
- Finding good quality information
- Knowing when to reference
- Knowing when to quote rather than paraphrase
- Paraphrasing key texts
- Referencing in the correct format
- Summarising in your own words
- Time management
- Writing with an academic voice

Figure 4: Answers to the question "Which of the following do you find challenging?" University of Bradford Plagiarism Survey 2010

Figure 4: Answers to the question "Which of the following would you consider to be plagiarism?": University of Bradford Plagiarism Survey 2010 (n=703)
The Plagiarism Avoidance for New Students Course

In May 2011, the Dean of Students gained a consensus at the University Learning and Teaching Committee that the previous piecemeal approach to plagiarism awareness should be consolidated into a single compulsory university-wide course for all new students, starting with the September 2011 intake. It was variously suggested that the course be restricted to either undergraduate or international students, but statistics from PAP referrals showed that, although significantly more international students were referred than would be expected from the University population\(^1\), home students are by no means immune (see table 1).

<table>
<thead>
<tr>
<th></th>
<th>University of Bradford population by domicile(^2)</th>
<th>Referrals to PAP by domicile(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>74%</td>
<td>66%</td>
</tr>
<tr>
<td>Non-UK EU</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>International</td>
<td>18%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Table 1: Students by domicile: percentages referred to the PAP compared to percentages in the university as a whole

<table>
<thead>
<tr>
<th></th>
<th>University of Bradford population by level of study</th>
<th>Referrals to PAP by level of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>71%</td>
<td>77%</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>29%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Table 2: Students by level of study: percentages referred to the PAP compared to percentages in the university as a whole

Table 2 shows that the proportion of postgraduate students referred closely matches the percentage in the university as a whole, showing that the problem of plagiarism is not confined to the undergraduate population.

The library was tasked with designing the course, which we named the Plagiarism Avoidance for New Students course or PANS. In contrast to the PAP, which concentrates on the mechanics of referencing, the emphasis of this course was on introducing the concepts and ethics of plagiarism. Completion of the course had to be monitored, so our only choice for delivery route was through our VLE, Blackboard.

The programme consists of five learning objects and a ten-question test.

The original learning objects were:

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\(^1\) Significant difference at the p<0.01 level tested with chi-squared test
\(^2\) Data for all students in 2010/11 year, taken from University of Bradford Data Centre
\(^3\) Data from feedback forms from students referred to PAP, 2008-2011.
What is plagiarism? This outlines the definitions of plagiarism, including audio clips from Becka Colley, Dean of students, and Baba, one of our Student Learning Champions. (Figure 5 shows a screenshot of this object).

Types of plagiarism. Gives detailed examples about the types of behaviour that count as plagiarism.

Frequently asked questions about plagiarism. Examples of real questions that students ask about plagiarism and their answers, with links to further information.

Is this plagiarism? Scenarios in which the students have to decide if the behaviour described constitutes plagiarism.

**Views on plagiarism: What is plagiarism?**

Click on the audio icon to hear views, or read the text transcripts below

Becka Colley, Dean of Students

Plagiarism is cheating by attempting to pass off someone else’s work as your own. This is not just their exact words but also ideas, images, anything that was created by someone else. It doesn’t matter who that other person is, whether it’s a famous author, a classmate, or an anonymous photographer who’s posted an image on a web page, every time you use someone else’s work you must acknowledge it. Plagiarism also includes working with classmates when you should be working alone or re-submitting the same piece of work for several assignments.

Baba, Student Champion

Plagiarism is using resources like other people’s research findings without acknowledging the source or referencing it appropriately.

Figure 5: Screenshot from the PANS (images used with permission of the subjects)

The results of our graduate trainee’s project, in which students reported that the negativity surrounding the concept of plagiarism was very daunting (O’Hara, 7), led us to try to frame the course in a far more positive light, adding an object entitled “Correct use of sources”. This now appears after the “What is plagiarism” object, and introduces the benefits of correct attribution.

We used the adaptive release function of Blackboard to allow the objects to appear one by one, hoping to force the students to work at a more reflective pace instead of diving straight for the quiz. The quiz consists of ten questions on various areas of plagiarism and poor academic practice, mostly yes/no questions but with some multiple choice. The answers to all of the questions are contained within the learning objects.
The programme was supported by an entirely new web page, Plagiarism Explained (University of Bradford Library), so that if a student wants further information on any aspect of the lessons they can follow links to that specific area on the website. This complements the re-vamped referencing web page.

We hoped to make the course entirely generic but found that we could not create a course on plagiarism without mentioning individual referencing schemes. We decided to create versions for Harvard and Numeric /IEEE styles. We also had to try to ensure the course was relevant and comprehensible to all of our new students, whatever their age, subject background or country of origin.

The University of Bradford was at that time divided into seven Academic Schools, each with their own referencing styles. The method of delivery of the PANS was decided in negotiation with each School. Most chose to release the course and require students to complete it in their own time, others decided to run it in scheduled sessions, mostly in collaboration with the subject librarians.

As the primary learning outcome of the course was to ensure that students had a thorough understanding of plagiarism, the pass mark was set high at 70%. We observed when running the PAP that some students consider the safest course is to answer “yes” to every “is this plagiarism?” question, so we had to ensure that a student who pursued this strategy would not achieve the pass mark. The course was designed to be formative rather than punitive, identifying students at risk of plagiarism and referring them for further guidance from their personal tutors or the LDU. Completion was monitored by the schools, with penalties for non-completion varying according to schools. Some schools would not mark work until the course was completed, in others the students had to make a personal appointment with the Associate Dean.

**Constraints and challenges**

We faced a number of technical challenges in rolling out the course in such a short timescale. The PANS was piloted with a small postgraduate course in the first week of term, there being no opportunity to test it on a “live” group of students before. Some of the problems (such as the migration problem discussed below) identified in running that session led to a radical re-design and re-issue two days later.

The programme was to be released to a huge number of students to complete in their own time with no supervision so we reluctantly decided that, in the interests of security, students would not be able to see the answers to the quiz once they had completed it.

There was no single area in Blackboard in which we could place the programme and reach all relevant students, so subject librarians identified core first year modules or school organisations and embedded the programme in those. In all, the course was deployed in nearly 50 areas of Blackboard, which brought challenges of tracking students who should be taking the course and of fixing any problems that arose. The intention was that departmental administrative staff should monitor completion and pass rates, so the course was placed in areas to which they have access.

The course was initially designed to be interactive, but migration issues with the VLE and compatibility problems with a wide range of hardware and operating systems forced us to remove
all interaction and deliver the course as a series of PDF files. We also found that some forms of animation did not work on hardware such as Macbooks.

The test was set to force completion in one session, which caused immense problems if the student lost connection for any reason midway through the test. If this happened the subject librarian needed to re-set the test to allow the student another attempt.

**Development of the PANS**

These difficulties outlined in the preceding section were addressed during the 2011 autumn term and a modified version of the course was released in January 2012.

Firstly, we tackled the single biggest complaint received from students and academic staff, which was that students were unable to see the answers to the questions (though we had released them to academic staff). We created a pool of 50 questions in ten subject categories, which provides a different test for each student. The tests contain one question from each category, which appear in a random order. The students now receive the correct answers and detailed feedback.

We also looked at the breakdown of results by question for a sample of the responses to see which questions had proved most problematic to students. In some cases, the questions were badly worded so were revised. In others, subject librarians who had observed the course being delivered in sessions considered that the problem lay with students’ understanding of the issue rather than with the wording of the question. In these cases more information was added to the lessons. Some examples are shown in table 3.

We have an action plan for the future development of the programme, which will be implemented throughout 2013. We have long suspected that much of the problem with plagiarism awareness stems from the transition into Higher Education, and there is evidence in the literature to imply we are not alone in this (Evans, 1-12; Handa and Fallon, 126-139; Kantanis, 100-10). Our colleagues are cultivating links with local schools to educate sixth form students about referencing and plagiarism, and also adapting the PANS into learning objects for school librarians to use. We will also roll out the programme to our collaborative partners.

The major technical challenges have revolved around migrating the PANS into many areas of the university’s VLE, restricting the amount of interactivity we could include, and also hindering monitoring of completion and pass rates by library staff. We will create bespoke areas for the PANS in future, which will also allow greater customization of the course to subject requirements and departmental referencing styles.
## Table 3: Excerpt from action plan from first semester feedback

<table>
<thead>
<tr>
<th>Original question</th>
<th>Total with correct answer</th>
<th>% with correct answer</th>
<th>Observations on student difficulties with question</th>
<th>Suggested action</th>
</tr>
</thead>
<tbody>
<tr>
<td>You discuss an essay assignment with a classmate. She has some interesting ideas, which you use in your essay. No reference to your classmate is included in your essay.</td>
<td>253</td>
<td>24%</td>
<td>After discussions with students, we feel this is a poorly judged question. Even though we do not feel that this would be a case of plagiarism it is a very grey area.</td>
<td>Re-word the question such that classmate recommends useful published sources rather than has ideas that are used</td>
</tr>
<tr>
<td>You cite the fact that Barack Obama is president of the United States. You have consulted several sources and they all agree with this. You do not cite any of the sources which you have consulted</td>
<td>663</td>
<td>64%</td>
<td>Though this is a well-known fact, the consultation of sources implies to some students that this is not common knowledge.</td>
<td>Remove mention of sources: reword as &quot;You use the fact that Barack Obama is president of the United States&quot;</td>
</tr>
<tr>
<td>Your tutor sets you an individual assignment. You form a study group, each member of the group researches and writes one aspect of the assignment. One of you collates the research to produce the finished essay, and you all submit it.</td>
<td>977</td>
<td>94%</td>
<td>Even though most students got this question right, many were observed looking up the meaning of word &quot;collates&quot; on Google.</td>
<td>Replace word “collates” with “collects”</td>
</tr>
<tr>
<td>English is your second language, and you are not confident about expressing yourself. You tell another student what you would like to say in your essay, and she writes the essay for you.</td>
<td>930</td>
<td>89%</td>
<td>Several students vehemently argued that the practice described was perfectly legitimate.</td>
<td>Increase prominence of lesson and explain in more detail why this is unacceptable</td>
</tr>
</tbody>
</table>
Impact of the PANS

Nearly 3000 students took the programme between October and December 2012. We found that the course was more successful when delivered in a librarian-led teaching session rather than letting students complete in their own time. Completion and pass rates both improved (see table 4).

Table 4: Supervised and unsupervised completion and pass rates of 2012 PANS

<table>
<thead>
<tr>
<th></th>
<th>% of new students taking test</th>
<th>% of students achieving over 70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools where PANS was supervised</td>
<td>80%</td>
<td>93%</td>
</tr>
<tr>
<td>Schools where PANS was unsupervised</td>
<td>50%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Following the introduction of the PANS subject librarians sought feedback at staff student liaison committees and from academic colleagues as to its effectiveness. Feedback was broadly positive, and most negative comments were around technical issues that were resolved in the second version.

The most striking result has been the reduction in referrals to PAP for breaches of assessment regulations.

![Plagiarism referrals by year of study](image)

Figure 6: Referrals for breaches of plagiarism regulations by year of study, 2008-2012

Figure 6 shows the referrals for breaches of plagiarism regulations by year of study. The “first year” category includes all in their first year of study at the University of Bradford, whether
undergraduate, postgraduate or direct entry. When the PAP first ran in 2008-9, student in their first year of study were by far the biggest group referred. In 2011-12, all such students should have taken the PANS, and referrals have dropped significantly\(^4\). The fall in referrals had started before the PANS was introduced, possibly due to the awareness-raising efforts of librarians and the LDU as outlined above. However, the fall since the introduction of the PANS has been the most dramatic over the 4 years of the programme.

**Conclusion**

Since 2008 the library has been involved in a number of initiatives to raise awareness of plagiarism, easing the transition into Higher Education for a significant proportion of our students and addressing a major factor in student retention and satisfaction. While initially the focus was on remedial work for students who had breached plagiarism regulations, the scope broadened to introducing the concepts surrounding plagiarism to all new students at the point of need. In the future we intend to expand our supportive work to local schools and hope to support the widening participation agenda by de-mystifying one aspect of tertiary study. The Widening Participation agenda has been an important part of UK government education policy under the last two governments, giving the opportunity to access Higher Education to everyone with the potential to benefit from it (HEFCE). We now have a robust system for dealing with plagiarism breaches that addresses the problem without being unduly punitive. The introduction of a comprehensive induction programme has seen a dramatic drop in breaches of plagiarism regulations. Whilst we cannot prove a causal link, we can support the findings of previous studies (Chen and Van Ullen, 209-235; Handa and Fallon, 126-39; Xiao, 654-68) that instruction is an effective means of reducing student plagiarism.

**Acknowledgements**

The programmes described in this paper would not have been possible without the support of many others within the institution. To name but a few:

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- Bill Hale, Department of Archaeological, Geographical and Environmental Sciences, who gave invaluable help with statistics
- Chi-squared statistics produced using Minitab and Graphpad (http://graphpad.com/quickcalcs/chisquared2/)

\(^4\) For students in the first year of study, significance is Chi-squared 46.7182, p-value 0.000,
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