

CS96 Final Report:
An Investigation into the
Early Course Selection Issue

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Foreword

This report is the work of the eleven students enrolled in the Harvard College course Computer Science 96 (System Design Projects) in the fall term of the 2003-2004 academic year. The aim of the course is to help the students learn about the process of solving informational problems by providing them the opportunity to undertake an extended, focused problem-solving effort. The course is centered around an open-ended real-world problem defined by an interested “client” in which the students work as a self-directed team.

This year, the problem was motivated by the discussion of preregistration that arose in the Faculty of Arts and Sciences last academic year at the instigation of members of the FAS administration. The present report is an expanded version of the students’ public presentation on January 8, 2004 to faculty members of the Division of Engineering and Applied Sciences, members of the FAS administration, and other guests. Their recommendations include proposals to improve information gathering and retention, changes to CoursePack distribution practices, and, most centrally, improved mechanisms for predicting course enrollments. This report and video of the presentation can be found at the course web site (<http://www.courses.fas.harvard.edu/~cs96/>).

Throughout the course, the students organized themselves and determined how they would address various issues, including their data gathering and analysis efforts, their presentation, and this report. The instructional staff acted as coaches and critics. While this report was prepared and written by the students of CS96, as faculty adviser for the course, I concur quite generally with their recommendations.

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Abstract

In September 2002, William Kirby, Dean of the Faculty of Arts and Sciences at Harvard University, proposed a plan of early course selection as a way to ease various concerns registered by administrators, students, and faculty. While the proposal was tabled the following spring, the concerns it raised remain present. Our investigation was undertaken to explore these issues and formulate alternate solutions to them.

To identify the problems that these parties hoped early course selection would address, we conducted numerous interviews with administrators and faculty members and administered surveys to undergraduates, graduate students, and faculty. Using this research, we distilled the problems into five main issues: teaching fellow hiring, classroom assignment, CoursePack availability, textbook availability, and academic advising. Teaching fellow hiring was recognized to be the most significant motivating factor of the early course selection proposal, so it received the bulk of our efforts.

After identifying the major causes and scope of these problems, we formulated four classes of potential solutions: providing early course enrollment information; centralizing and improving processes; improving data collection and use; and redefining or diverting the problem. We investigated many solutions within these classes that would address different combinations of the issues we wanted to address.

As part of our investigation, we chose to implement, test, and evaluate an automated machine-learning model that predicted course enrollments based on historical data. Our model was very successful, improving by as much as a factor of four over human predictions. Additionally, the model's predictions allow us to hire half the necessary teaching fellows well before the start of classes, with only 1% incorrectly matched.

We recommend the usage of an automated model, in concert with human review, to improve the prediction process, as well as a mandatory, non-binding survey of student course selections, and better recording of previous enrollment predictions. We make other recommendations we believe will help the CoursePack availability, textbook availability, and classroom assignment problems, but believe advising is a different class of problem that we cannot improve without further study. More generally, we conclude that none of the five issues can be fully solved by earlier course enrollment information.

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1 Introduction

In September 2002, William Kirby, Dean of the Faculty of Arts and Sciences at Harvard University announced his intention to transform the class registration process. At the time, students were given the privilege of a “shopping period,” in which they could attend classes freely for one week before formally enrolling. This system, while appealing to students, created multiple problems for the administration and faculty, which Kirby hoped to alleviate.

Early course selection, described in *Early Course Selection: A Discussion Document*,¹ in January 2003, was designed to alter the course registration process by removing shopping period, instead requiring students to register for courses during the previous semester. The proposal aimed to use the earlier information provided to address several current issues of concern: the difficulty involved in hiring teaching fellows (TFs), procurement of textbooks and other course materials, classroom allocation, undergraduate advising, and teaching quality during the first week of class.

The plan was met with an unexpected level of opposition from faculty and students, as many believed it would restrict student flexibility, while providing few if any benefits to the administration. In March 2003, the proposal was postponed indefinitely; however, the issues motivating the proposal still stand as concerns today.

We undertook this investigation to address these concerns. In Section 2, we will describe the methodology we used to investigate the issues presented in the discussion document. In Section 3, we will present our analysis of the five key issues we identified: teaching fellow hiring, classroom assignment, textbook availability, CoursePack availability, and academic advising. In Section 4, we will explore the four categories of potential solutions we have generated—providing early course enrollment information, centralizing and improving processes, improving data collection and use, and redefining or diverting the problem—followed by an in-depth analysis of a machine-learning solution we implemented and tested in Section 5. We will conclude with recommendations to address each of the issues in Section 6, and a summary of our most important discoveries in Section 7.

2 Methodology

Our work fell into two phases: background research and data collection and analysis. The background research phase provided insights from various stakeholders into the issues surrounding early course selection. The data collection and analysis phase involved the collection of historical enrollment and course data, the development of potential solutions to the problems discovered in the research phase, and the assessment of the viability of predicting early course enrollments with historical data.

¹Jeffrey Wolcowitz, Arlene Becella, and John O’Keefe. <http://www.courses.fas.harvard.edu/~cs96/Papers/wolcowitz.early-course-selection.pdf>

2.1 Background Research

Through our research, we sought to explore the various issues surrounding early course selection and to assess the scope of certain issues. This information was gathered primarily through interviews and surveys.

We interviewed various stakeholders in the administration to better understand their opinions on the current and proposed systems. Through these interviews, we gained historical information that helped us understand problems faced in the past and attempted solutions. This information was used to narrow down the issues we will discuss in this paper. The interviews also enabled us to assess these issues and the goals for their solutions from the viewpoints of the various parties.

We conducted two forms of interviews: group interviews and individual interviews. During group interviews, interviewees gave informal presentations and participated in question and answer sessions with the class. During individual interviews, interviewees were asked a more formal list of questions developed by the interviewer in advance, aimed at eliciting more specific information than in the case of the group interviews. Group interviews were conducted as a class with Benedict Gross, Dean of Harvard College; Jeff Wolcowitz, Associate Dean of Harvard College for Undergraduate Education; John O’Keefe, Assistant Dean of Harvard College; Peter Ellison, Dean of the Graduate School of Arts and Sciences; and Susan Lewis, Director of the Core Program. Individual interviews were also conducted with Debby Green, Department Administrator for the Office for Undergraduate Education; David Monteiro, Student *CUE Guide* Coordinator; Louie Franklin from the COOP textbook department; Kenton Doyle, Geraldine Barney, and Heather Curtin from Harvard Printing and Publication Services; and various department administrators (see Appendix B). Follow-up individual interviews were also conducted with Dean O’Keefe, Dean Ellison, and Ms. Lewis.

We conducted three surveys—an undergraduate student survey, a graduate student survey, and a faculty survey—designed to help us evaluate the relative magnitude of specific problem areas as understood from the interviews. The undergraduate student survey focused on availability of course materials and advising. The graduate student survey focused on TF hiring. The faculty survey focused on TF hiring, classroom assignment, and advising. For more detailed survey information, please refer to the appendices.

The undergraduate student survey was a web-based form distributed to upper-class House “open email lists” and advertised in the freshman Yard Bulletin. The participants were validated through the Harvard PIN system to guarantee their status as undergraduates and to prevent multiple submissions. We offered a prize of \$50 to a randomly chosen participant as an incentive. The survey received 863 responses, a 13.3% sample of all undergraduates.

The graduate student survey was also a web-based form distributed to graduate student open email lists and departmental email lists. Again, the participants were validated through the Harvard PIN system to guarantee their status as graduate students and to prevent multiple submissions. We limited our tar-

get population to students enrolled in the Graduate School of Arts and Sciences (GSAS), thus omitting some groups, such as Harvard Law students, who are frequently hired as TFs. This decision was made based on our research, which indicated that GSAS students were most affected by difficulties with TF hiring. We offered a prize of \$50 to a randomly chosen participant as an incentive. The survey had 450 respondents, a 13.2% sample of all GSAS students.

The faculty survey was a paper form distributed in person to a randomly selected sample of 77 faculty members. This sample was drawn from all faculty who were course heads in both Spring 2003 and Fall 2003. Faculty members were often difficult to contact or reluctant to take the survey, so we received only 29 responses, approximately a 4.5% sample size. Because of the low sample size, results from the faculty survey were used only as anecdotal evidence.

2.2 Data Collection and Analysis

The data collection and analysis phase had three parts: the collection of data, the development of potential solutions, and the formulation of recommendations.

Historical data about student behavior were collected from two sources: the Registrar and the CUE office. The Registrar provided ten years of enrollment and course catalog data and the CUE office provided twelve years of course evaluation data from the *CUE Guide*. The registrar data contained a few inconsistencies that needed to be cleaned before use, while the *CUE Guide* data had to be intensively reconstructed from low-level historical files of individual responses and then aggregated for meaningful interpretation. All data were stored in a MySQL database.

Potential solutions were generated based on discoveries in the research phase and more general analysis. Possible implementations were discussed and the potential solutions were divided into four major categories based on their effect: providing early enrollment information, centralizing and improving processes, improving information distribution and use, and redefining or diverting the problem. Each potential solution was qualitatively analyzed, using sources such as the survey results. One potential solution, a machine-learning model, was implemented and thoroughly evaluated. The Registrar and *CUE Guide* data were used as the basis for features that fed into a machine-learning model for predicting course enrollments. The results were then compared to automatic and human baselines.

After analyzing the potential solutions and the assessment of the problems provided by the research phase, we formulated recommendations for the main issues we had identified. The recommendations were based on the goals as stated by the various stakeholders during the research phase.

3 Issues

Based on the issues raised during the research phase, we decided to focus on five main issues in this study: (1) teaching fellow hiring; (2) classroom assignment;

(3) CoursePack availability; (4) textbook availability; and (5) academic advising. In this section, we will outline the current state of each issue—the uncertainty in the current TF hiring system, the disorganization in the decentralized classroom assignment system, the inconsistent availability of textbooks and CoursePacks, and the student and faculty dissatisfaction with an advising system focused on study card signing.

3.1 Teaching Fellow Hiring

The current TF hiring system is deployed departmentally but funded centrally. In the spring, professors and departments estimate how many TFs will be required for the coming year’s courses and advertise positions based on these numbers. The professors and/or departments then hire TFs, but positions are not necessarily guaranteed. The funding for TFs must be requested from University Hall, which has strict guidelines for the number of students a TF must teach in each section.²

The early course selection proposal indicates three main concerns with the current TF hiring system: inability to make firm commitments early enough to allow graduate students time for planning their semesters; difficulty matching TFs to subject-appropriate courses; and difficulty training TFs who are hired late. It attributes these problems to the uncertainty over how many TFs a course will require, as exact enrollment figures are not known when making hiring decisions.

Based on the Early Course Selection proposal and discussions with administrators, we decided to focus on four main problem areas in the hiring of TFs: finance, quality of education, administrative overhead, and the equivalence of supply and demand. The first three are problems that arise as a result of uncertainty surrounding TF numbers, while the last is a problem inherent in the departments that would not necessarily be resolved given more accurate predictions of course enrollments.

Finance Issues The issue of hiring TFs proves to be a financial problem for FAS. Prior to 1989, departments would simply aggregate a total budget for TFs, which the deans would approve. There would be no formal review process after the start of the semester to make sure the amount of allocated funds was appropriate. This led to an incentive to overestimate the number of TFs needed, as the department could use any excess money towards other expenses. In order to keep this spending under control, the current system of centralized funding with strict accountability was developed in the late 1980s.³

Teaching is an important part of the financial aid package for many graduate students, particularly in the humanities and social sciences. In these two areas, third- and fourth-year graduate students (“G3s and G4s”) are guaranteed teaching fellowship positions as part of their financial aid packages. According

²In-class discussion with Dean Wolcowitz and Dean O’Keefe, September 18, 2003.

³In-class discussion with Dean Wolcowitz and Dean O’Keefe, September 18, 2003.

to Dean Ellison, if a graduate student cannot find a teaching position, FAS must pay the student anyway. It seems infeasible to expect to fill all TF positions before the start of a term, so he defines an acceptable situation as one where a humanities or social sciences department would be able to guarantee teaching positions to all its G3s and G4s, as well as fill 80% of the remaining TF positions.

Hiring difficulties also have financial implications for graduate students who wish to teach and who are not in their third or fourth years. If these students cannot be guaranteed—nor definitively denied from—teaching positions until the beginning of the term in late September or mid-February, they have no way of securing income for the semester until a few weeks after it has begun. This becomes a significant burden when students have to try to secure other jobs, hopefully guaranteed, in case they are unable to get TF positions, or when they have to scramble to obtain other jobs when they find out that the teaching job they were counting on is not available.

Based on our graduate student survey, in the 2003 academic year, approximately 1 of every 13 GSAS student TFs was hired after the start of the semester. Extrapolated over the entire GSAS student population, this amounts to about 225 GSAS student TFs total. Furthermore, 250 TF positions tentatively assigned to GSAS students were withdrawn, roughly 100 of these after the start of the semester.

Quality of Education When TFs cannot be hired well in advance, a scramble for TFs at the start of the semester results. In cases where there are a limited number of available teaching positions, this leads to graduate students not being able to teach the courses to which they are most suited. Students must worry about obtaining a job first and the suitability of the job second. Likewise, if a professor is in dire need of TFs and the most qualified students are already tied up in other courses, less qualified TFs must be hired. When a TF is matched with a course covering unfamiliar material, the ability of the TF to offer quality instruction may suffer.⁴

TF hiring at the beginning of the semester may also affect the quality of instruction because of the effect on training. Course instructors typically expect TFs to review, learn, and prepare material relevant to the course being taught before the beginning of the semester. In some cases, this preparation takes the form of compulsory, course-specific training that takes place in the weeks preceding the course's first meeting. Such training is deemed vital to TF preparation and to the proper functioning of the course. In other cases, TF preparation may involve reading through a large corpus of assigned readings. TFs who are hired close to or after the beginning of the semester may not receive proper training and may not have sufficient time to prepare course material. As a result, the quality of instruction offered by such TFs may again suffer.⁵

⁴Department administrator interviews.

⁵*Ibid.*

Administrative Overhead Last minute hiring, firing, or switching of TFs results in increased administrative overhead. When graduate students are guaranteed TF positions that are later found unnecessary, there is often a burden on the departments to find them positions elsewhere, particularly for G3 and G4 students.⁶

Last minute switching also leads to personal hardship for TFs and professors. In the cases where the student is not a G3 or a G4, or where there is no central administrator involved, the students and professors must deal with this matching problem themselves, at a time when they are trying to focus on beginning a new term.⁷

Supply versus Demand The structure of some departments may preclude them from being able to effectively match their graduate students with requisite teaching positions for the courses offered. When departments do not have enough graduate students to staff all of the undergraduate courses they offer, or when they have more graduate students than teaching positions available, they are left in the difficult position of trying to match students and jobs that do not fit. In Near Eastern Languages and Civilizations (NELC), for instance, there are 90 graduate students, but only 20 undergraduate concentrators.⁸ To further compound the problem, the knowledge of graduate students in NELC is so specialized that many can only teach a very specific range of courses. Finally, although its language courses require the largest number of TFs, most graduate students in the department cannot fill these roles because they must be near-native speakers of the language. In contrast, departments such as Economics and Statistics, which have large teaching staff requirements but small graduate populations, must recruit TFs from other departments and schools, to meet their demand.⁹ These issues only exacerbate the problem of hiring TFs before the beginning of each term.

3.2 Classroom Assignment

Our investigation into the classroom assignment problem was hampered by an inability to obtain permission to interview the administrators who allocate classrooms. Our research is thus based on anecdotal evidence, or oriented from the students' point of view.

The current classroom assignment system is decentralized, with groups of classrooms controlled by different offices and departments. Some classrooms are limited to use by certain departments or certain times, while other classrooms even come under the domain of different departments for different times of the day. Moreover, different configurations of audio/visual devices and other special

⁶*Ibid.*

⁷In-class discussion with Dean Ellison, September 23, 2003.

⁸Interview with Jennifer Petrallia and Kathleen Coultier, October 17, 2003.

⁹Interviews with Debbie Whitney, October 17, 2003, and Betsey Cogswell, October 15, 2003.

equipment also affect which courses can be held in which classrooms. Furthermore, much of the instructional space available is not officially designated as classroom space and is thus difficult to identify and reserve by departments that do not control that space. Finally, there is no available master list of all instructional space in FAS.¹⁰

If the assigned classroom for a course is too large or small for the number of students that eventually enroll in it, the classroom is usually changed. Of the 63 courses examined in the faculty survey, 10 had switched classrooms after the beginning of the term. If a professor cannot find an appropriate classroom to accommodate the number of students wishing to take the course, the course must be lotteried to limit enrollment or moved to a different time or day when a suitable classroom is available. According to our undergraduate survey, in a Harvard career, a student will, on average, enter two lotteries, will be lotteried out of half a course, and will experience five to six classroom changes. Lotteries and timeslot changes result in disruptions in the schedules of both students and faculty members, and generate unnecessary administrative overhead. Therefore the goals of an ideal classroom allocation system would include eliminating or minimizing these occurrences.

The discussion document suggests that the major problem in classroom assignment is the number of students that cannot take courses because of classroom constraints. Also, if students cannot take a course because of such constraints, they do not have much time to find a replacement. If reliable information about the number of students that plan to enroll in a given course were available before the semester began, faculty would be in a better position to seek out appropriate classrooms for their courses, limiting the need for lotteries and timeslot changes after the beginning of the semester.

3.3 CoursePack Availability

While the discussion document does not mention CoursePacks specifically, many faculty members and department administrators expressed that not knowing exact enrollment figures ahead of time makes it more difficult for students to buy CoursePacks in a timely and convenient manner.¹¹ Currently, professors submit estimated enrollment figures to HPPS before the semester begins. Using its own experience and professors' estimates to guide it, HPPS prints CoursePacks for 65% of what it believes will be the final course enrollment.¹²

Often, the number of CoursePacks printed is not enough to cover student demand. Students seeking out of stock CoursePacks must request a restock and wait until the new CoursePacks are available. Students who return to buy restocked CoursePacks, however, often find that the restocked CoursePacks have been sold to other students, because there is no system associating CoursePacks with the students that request them. As a result, though it may only take

¹⁰Department administrator interviews.

¹¹Department administrator interviews.

¹²Interview with Kenton Doyle, Geraldine Barney, and Heather Curtin from HPPS, October 7, 2003.

a day or two to reprint a CoursePack, is not uncommon for students to go back to HPPS and request the restocking of a CoursePack four or five times. Recently HPPS instituted a system allowing students to check if a CoursePack has been restocked by going to a website, but this has only partially alleviated the problem. In our undergraduate student survey, 71% of students considered the problem of multiple trips “medium” or “large,” while 55% considered the resulting delay significant. Four times as many students considered multiple trips to be larger problem than delay than considered the problem of delay to be larger.

Another student concern with CoursePacks that has been frequently raised is the pricing. We did not consider this issue, however, as from our discussions with HPPS we learned that these high prices are necessary to cover their costs. An analysis of the past three semesters reveals that approximately 43% of the price of each CoursePack is applied directly to the compensation of copyright holders, 46% covers printing costs and 11% is necessary to cover administrative costs.

3.4 Textbook Availability

Students can choose from a large number of sources when obtaining course textbooks. While many students buy books online or borrow them from the library, the most popular source of textbooks is the Harvard COOP, with 65% of students in our undergraduate survey reporting they use it “Often,” compared to 29% using online vendors and 12% using the library. The COOP is the only distributor that receives book lists from almost all FAS courses and arranges them by the department and course title. Professors send their book lists and estimated enrollments to the COOP before the semester, who then decides how many books to purchase for the course, often deflating the provided estimated enrollment based on past experience.¹³

The discussion document suggests that students may have trouble obtaining textbooks at the beginning of the semester because the orders are not matched to actual student enrollments. When purchasing from the COOP, the main impediment to acquiring books at the desired time is that there may be no copies of the books in stock. As with CoursePacks this forces the student either to make multiple trips to the COOP, each time hoping that the necessary books will be in stock, or to wait for a notification of availability from the COOP via phone. There are two main reasons the COOP may not have a particular book. First, if the COOP does not order enough copies to satisfy the demand for a certain book, students who come later into the term have to wait for the COOP to restock. Second, if the COOP does not receive orders from professors early enough, books may not be available until after classes start.

A growing alternative to buying at the COOP is to order textbooks online.¹⁴ This method provides students with the benefits of not having to travel and of

¹³<http://harvard.bkstore.com/default.asp?x=979297735974|300&m=0804>

¹⁴Undergraduate student survey.

being able to place their orders at any time. However, students who use this method still must wait for books, as there is a longer delay associated with shipping books than with simply buying them from a nearby store. This means that students who desire to have their books at the start of classes must order them before arriving to school. However, this may not always be a possibility since students often do not know which courses they will enroll in until after classes have started, and professors do not always make reading lists available until after the term begins.

Another option for the student is to rely on availability of course readings in library, rather than purchasing books. In order to accommodate these students, the Harvard College Library keeps a certain number of each textbook on reserve, so that a student may check out a textbook for a limited amount of time. This option is much less expensive for the student, but is also much less reliable, as it depends on the availability of the small number of reserve copies.

Overall, 58% of students in the survey found obtaining textbooks to be “very easy” or “easy” with only about 15% indicating that they found it hard or very hard to obtain necessary textbooks in a timely manner. When compared with CoursePack purchasing, 48% of students rated multiple trips as a greater problem in CoursePacks than in textbooks, whereas only 20% of students thought multiple trips were a greater problem in textbooks. 50% of students rated delay as a greater problem in CoursePacks than in textbooks, whereas only 18% of students thought delay was a greater problem in textbooks. These results indicate that the problem of obtaining textbooks in a timely manner is not a large one and that the CoursePack purchase and distribution system is considered significantly more problematic by students.

3.5 Academic Advising

The Standing Committee on Advising and Counseling’s 2001 senior survey indicates general student dissatisfaction with undergraduate advising throughout all departments. Asked about their satisfaction with advising, graduating students ranked their experience at 2.83 on a scale of 5—interpreted as “slightly unsatisfactory”—which was lower than the scores for concentration academic experience and general academic experience.¹⁵ A particular area of discontent is a lack of interaction with advisors beyond cursory study card signing. The discussion document implies that a major problem with advising is the rushed nature of advising conversations during shopping period, and suggests moving mandated advising to the previous semester.

Harry Lewis, then Dean of Harvard College, commenting on the results, particularly noted that advising is most successful when “tied to some ongoing matter of intellectual substance” such as a tutorial or thesis, and is least successful when “it amounts to checking degree requirements and course sequencing.”¹⁶ Unfortunately, according to Harvard Magazine, “one-sixth of students said they

¹⁵ “Amending Advising” (<http://www.harvard-magazine.com/on-line/030237.html>).

¹⁶ *Ibid.*

did not meet with a concentration advisor all year, and half did so only once or twice.”¹⁷ These statistics imply that the advising system is used for little more than study card signing by the majority of students.

Our undergraduate survey confirmed the conclusions of the 2001 survey. Less than 10% of respondents said it was “Hard” or “Very Hard” to contact their advisor and only 5 of 152 negative comments provided complained of rushed advising sessions. However, almost one third of these commenting students complained that they lacked a substantive relationship with their advisors, discouraging the students from approaching them for advice, while many students providing positive comments credited their successful experience to a close relationship with their advisors. Meanwhile, a number of respondents in the faculty survey complained that students did not seek out a relationship and only approached them when they needed their study cards signed. The results indicate that the problems that plague academic advising do not stem from a lack of adequate time for meaningful advising interactions with faculty before course selection deadlines, but rather from a lack of close relationships with advisors.

4 Potential Solutions

Before recommending any single solution to the problems that were uncovered during the discussion of early course selection, we will enumerate a number of *potential* solutions to these problems. Using this list of potential solutions, we attempt to assess the relative strengths and weaknesses of each one in light of the problems discussed earlier. We do not propose to implement all of these solutions and qualitatively evaluate them; we simply present the space from which we will draw our final recommendations. The solutions we present fall under four major categories: (1) providing early course enrollment information; (2) centralizing and improving processes; (3) improving data collection and use; and (4) redefining or diverting the problem.

4.1 Providing Early Course Enrollment Information

Providing earlier information on enrollments to the appropriate administrators and faculty may help solve several of the problems we are investigating: teaching fellow hiring, textbook orders, and classroom assignments. While such information could never be entirely accurate, in order to be useful, it must accurately reflect actual enrollments to some degree.

The intended primary effect of the early course selection proposal was to obtain accurate student enrollment figures earlier than they are currently available. There are other methods, however, by which we could obtain similar information. In this section we discuss potential sources of early information and several methods to predict enrollments.

¹⁷ *Ibid.*

4.1.1 Potential Sources of Data

There are two main sources of data that can provide early course enrollment information: (1) existing historical data and (2) student-supplied data.

Historical Data Historical data provide information about a course's past offerings that can be used to predict future enrollments. Three sources of historical data that are particularly relevant are enrollment data, departmental prediction data, and *CUE Guide* data. We find varying degrees of accessibility for the data: the enrollment data are readily available, the departmental prediction data currently are not widely available, and the *CUE Guide* data are available but not easily accessible. Historical data are essential for enrollment predictions because, in general, students do not choose their courses randomly, so we may be able to identify characteristics of the past data that we can apply to predict future enrollments.

Enrollment Data Enrollment data are the most obvious and available form of historical data that can be used for future prediction. These data are simply the final course enrollment for each past offering of the course. The Registrar stores historical course enrollment information and releases to each department the past five years of data for its courses.¹⁸ According to our interviews with department administrators, most departments use historical enrollment data as either the primary method of prediction or as a component of a more complex prediction technique.

The enrollment data can be used to find trends in enrollment. For example, if a course's enrollment has declined for the past five years, it may be reasonable to expect this trend to continue in the future, or vice versa. Since it is not necessarily straightforward how past enrollment figures translate into future enrollment figures, predictions need to be informed by what types of trends are likely to occur for each course. Changes in enrollments from year to year can also be compared with changes in factors such as course time, professor, and number of concentrators in order to try to determine if there may be a correlation between these specific factors and final enrollment figures. These correlations could further our ability to predict future course enrollments.

Departmental Prediction Data All departments must utilize some sort of prediction process when assigning classrooms, ordering textbooks, and hiring TFs, even if this process is no more complicated than predicting that enrollments will be the same as those of the year before. However, few departments store these predictions from year to year.¹⁹ This prevents the analysis of past predictions compared to final enrollments, which could be used to improve the prediction process. By seeking explanations about why a course deviated from the predicted number of students, perhaps trends could be found that could be

¹⁸Interview with Susan Lewis, October 3, 2003.

¹⁹Department administrator interviews.

used to refine the prediction process. Most importantly, past prediction data is necessary as a basis of comparison to evaluate alternative prediction methods. Otherwise, it would be near impossible to determine the efficacy of a new system, such as early course selection.

CUE Guide Data The *CUE Guide* is a compilation of student course evaluations published yearly by the Committee of Undergraduate Education and distributed to students at the beginning of the fall semester. The guide contains a listing for each course being offered that has been evaluated in a prior year by a sufficient number of students. The listing contains course ratings, which are a combination of aggregate scores in categories such as professor quality, course quality, workload, and difficulty, displayed when at least seven students have responded, and written descriptions that summarize student comments and are included when at least fifteen students have responded.²⁰

Since the students enrolled in a course provide the information for the *CUE Guide*, the guide is a useful source for gauging the student interest in and reaction to a particular course. Because students generally consult the *CUE Guide* while deciding which courses to shop and to take, the CUE evaluations likely affect student decisions about course enrollments.

The high level of detail in the data can also be exploited when making predictions. If a professor with a low CUE rating is replaced by a professor with a high CUE rating, enrollments may increase even though the new professor has never taught this particular course. In this way, the *CUE Guide* data may help enrollment predictions by serving as a proxy for how the course is received during shopping period. A professor with a high CUE rating is probably more engaging and may be more able to attract students during shopping period.

Student-Supplied Data Since the students are ultimately responsible for what the final enrollment numbers will be in most courses, it seems logical that we could obtain enrollment estimates a semester or a year in advance by asking students what courses they are going to take. The early course selection proposal was a proposal of just this sort.

There are several variations on such a survey of the students: taking the survey could be voluntary or mandatory, and the survey responses could be either binding or nonbinding. These surveys would be administered well before the beginning of the semester in order to obtain earlier information, and thus would require that course listings and syllabi would be made available to students earlier. Below we discuss the various types of surveys that could be administered in order to obtain earlier enrollment information from the students.

Mandatory and Binding Survey There are two possible ways to implement such a solution. The most obvious example of a mandatory and binding survey is the early course selection proposal. This system would require students to formally indicate their intended enrollments for a particular semester by filling

²⁰Interview with Debby Green and David Monteiro, October 21, 2003.

out a study card prior to the end of the previous term. The course selections listed on the study card would be binding; students would be automatically enrolled in the courses they select. Modifying one's schedule in the first week of classes would require filling out Add/Drop forms and obtaining signatures from the appropriate professors and academic advisors. Such a system would eliminate shopping period in its current form.

Another possibility is to administer such a survey on a per-course basis. Professors of such courses would require interested students to enroll in their courses prior to the start of the term. This technique may prove particularly useful for courses with volatile enrollment. This method would preserve the current system for all other courses.

A mandatory and binding survey could improve course enrollment predictions, since initial enrollment figures would be available for courses once registration is complete. As a mandatory survey would guarantee responses from all students, it could potentially provide more complete enrollment estimates than a voluntary one.

Such a system would have certain advantages over the current one if enrollments stay relatively stable at the beginning of each term. However, the accuracy of a mandatory and binding system would be vulnerable to fluctuations that would occur at the beginning of each term due to the adding and dropping of courses. As long as students are free to modify their schedules, there can be no guarantee of the accuracy of these data.

A drawback of a binding survey is that it would limit students' ability to choose courses after having enrolled. While students are free to add or drop courses for which they have registered, this process carries administrative overhead. Adjusting one's schedule would still be possible, but doing so would require faculty and administrator signatures. This added difficulty may discourage students from adding and dropping courses.

Another potential drawback of such a survey is that it may induce "gaming" by students. For instance, because it is easier to drop a course than to add one, students may enroll in more courses than they intend to take. This would give students more flexibility in choosing courses at the beginning of the term, but would render enrollment predictions unreliable. Additionally, students may be more likely to enroll in limited enrollment courses to ensure themselves a space in the course if they choose to take it. Students would thus register to take the course even if they are unsure about their enrollment plans.

Mandatory and Nonbinding Survey A mandatory and nonbinding survey would require all students to submit their course enrollment plans before the start of the semester, but would not hold them to their decisions. The advantage of such a survey is that it would provide early course enrollment estimates while maintaining student flexibility. As there is no incentive for students to game the system, the information gathered may be more accurate than that obtained from a binding survey. On the other hand, the non-binding nature of the survey provides no incentive for students to answer truthfully.

Voluntary Survey A voluntary and non-binding survey would give students the option of submitting their course enrollment plans before the start of the semester without holding them to their decisions. This survey would provide a rough estimate of course enrollments without placing any new burden on students, as their participation is optional.

However, there are three main drawbacks to this approach. It is unlikely that students would choose to take the survey without an incentive. Even with an incentive there would be an unpredictable response rate and unavoidable bias. The results would be biased towards students to whom the incentive appeals most. Furthermore, the incentive would be limited in that it could not encourage truthful responses.

A voluntary and binding survey seems infeasible as it is unlikely that students will choose to take it.

Passive Survey: The Course Planner Application Another option that might be explored is an involuntary and passive survey in which students do not knowingly participate. Rather, other student behaviors would be mined for enrollment-predictive information. One way to implement this would be to create a course planner web application that easily allows students to research and plan their courses. The goal of the system is not only to make students' lives easier, but also to provide administrators with statistics on student interest. To this end, the browsing habits of system users would be recorded and compiled. Compiled statistics may include information on how many students have browsed the descriptions of particular courses.

Currently, searching for course information is laborious as the information is located in different places and is poorly organized. As this system would centralize this information, there is a natural incentive to use it. This may resolve the voluntary survey's problems of low participation and the non-binding surveys' problems of inaccurate results. Most importantly, it would collect an enormous amount of data that may be useful for predicting course enrollment.

This solution is not without its problems. It seems unlikely that students will use it prior to the beginning of the semester in order to provide the early information that we seek. Thus, there is a need for further incentives for using the system earlier than the first week of class. Furthermore, there may be bias in the subset of the population that uses this system, especially since there may be privacy concerns in using "spyware" tactics to collect information. Most importantly, it is uncertain whether students' browsing behavior correlates with their final course selections. Some courses may be popularly browsed, but seldom taken, or vice versa.

4.1.2 Methods to Predict Enrollment Information

In order to be able to provide professors and administrators with earlier information about course enrollments, even if we take advantage of the sources of information mentioned above, we must determine ways to synthesize this information to make accurate predictions. Although sources of early information

may provide insight into trends in enrollments and correlations between enrollments and certain factors, a final model must be developed to translate this insight into final prediction numbers. The potential solutions we outline here explain how this synthesis can be done manually, automatically, via some mixture of manual and automated processes, or by using an open market to reveal information.

A Manual Process A manual method of determining predictions would involve one or more people considering all of the available factors, weighing their relative importance, and using them to generate course-by-course predictions.

This method of course prediction is best exemplified by the administration of the Core office, under the supervision of Susan Lewis. Each April, a small group of people in the Core office spends two weeks predicting the enrollments of all Core courses for the upcoming year. Based on these predictions, Ms. Lewis then makes guarantees to the professors of these courses regarding the number of teaching fellows they can hire.

According to Ms. Lewis, the Core office has found this method of predicting course enrollments to be very effective, and has only infrequently found large discrepancies between its predictions and the actual enrollments. Thus, the guarantees made to professors regarding the number of TFs they can hire have generally not caused either the professors or the departments much trouble either in having to work with TFs who find themselves without the job they were hired for, or in having to deal with a large shortage of TFs for an unexpectedly popular course.

This method does not, however, prove to be helpful with regard to the problem of administrative overhead in TF hiring practices. The Core office has a committee of people who devote about two weeks to the prediction of course enrollments and calculation of TF hiring guarantees. These people have become expert at what they do because they have been involved in this prediction process for years, and have learned how to interpret the data that are available to indicate the future behavior of student enrollments. In order to extend this manual method as a solution for all of FAS, such a committee would likely need to be formed either in each department, central to each subject area, or central to all of FAS.

An Automated Process Alternatively, an automated process could be developed to synthesize available information about courses and enrollments to generate enrollment predictions. Such a system would eliminate much of the administrative overhead required by manual processes.

A computer model could be designed and implemented to accept the historical data mentioned above, such as past enrollments and *CUE Guide* data, into a model that would predict course enrollments. Such a model could be run by non-technical personnel, requiring only the uploading of data to the appropriate location. Predictions would arrive on demand as long as the input data were available.

We chose to implement such a model as a key component of our investigation. A full description and assessment of our system can be found in Section 5.

A Semi-automated Process Semi-automated processes combine the previous two techniques, either by using an automated process to generate input for a manual process, or by using a manual process to generate some of the inputs for an automated one. These semi-automated processes would take advantage of the speed of automation while maintaining the value of human insight.

One possibility is that a committee of people in each department, much like that led by Susan Lewis in the Core office, could run an automated system to generate preliminary predictions, and then review those predictions to see if any of the numbers seem inaccurate. Here the benefit is that this committee would know that several of the baseline factors in enrollment considerations, such as time of day, previous enrollment, and *CUE Guide* ratings, have already been factored into the predictions. The adjusting done by such a committee would be the result of its awareness of other extraordinary or non-quantifiable factors that would affect enrollments. This adjustment would take less time than a manual prediction process.

While an automated system relies on pre-existing historical data to produce predictions, another possibility for semi-automation would involve human input of subjective quantifications of the extraordinary and non-quantified data to the automated system. For example, an administrator could estimate the “appeal” of a course topic, something that could not be easily captured automatically. Here the process takes advantage of the value of human insight, while automating the synthesis of the numerous factors that contribute to enrollments. This system again partially eliminates some of the administrative overhead involved in making course predictions while still generating results at least as accurate as the manual predictions.

A more thorough discussion of the interaction between humans and an automated system can be found in Section 5.

A Market-Oriented Approach Another way that we can attempt to predict course enrollments is by creating a futures market for enrollments. Futures markets have proven effective in encouraging the release of data which is known to a subset of a population, and which would otherwise have remained hidden. A futures market for course enrollment would mine information from students, faculty, and all others who believe that they have more accurate information than whatever is currently accepted.

The advantages of a futures market are that it gives a natural incentive to the release of accurate information, it is completely voluntary, and it distributes the workload of predicting course enrollment among everyone who participates in the market. Such a system of prediction would also have access to the influence that word-of-mouth has in determining student enrollments, whereas the other systems we have discussed do not consider this factor. Some of the disadvantages are that it would likely involve the management of real money, which would

require some sort of payment by FAS. It could easily become a political issue and a source of mockery to the public, as it may appear to promote greed and gambling in the Harvard community. The completeness and usefulness of the data that is garnered through such a market may be qualified by bias in the subset of the population who actively participate in it. Such a system also relies on the presumption that the knowledge necessary to predict course sizes exists in any population in the Harvard community.

4.2 Centralizing and Improving Processes

In addition to obtaining earlier accurate predictions of enrollments, centralization of many administrative processes could alleviate some of the problems we are investigating. During our research, we found a number of administrative problems that further aggravate the underlying problems. In this section, we discuss (1) centralizing enrollment predictions, (2) improving TF hiring, and (3) centralizing classroom assignment procedures.

4.2.1 Centralizing Enrollment Predictions

As we discussed earlier, being able to accurately predict course enrollments before the semester begins could potentially solve many of the problems we have considered. Centralizing enrollment predictions is one possible way to improve the administration's ability to do this. We believe that the Core office does this successfully, with only a few exceptions, for all courses in the Core curriculum. Certainly, there are some aspects of Core courses that make predicting their enrollments different—perhaps easier—than those of other departments. For instance, Core courses are generally larger, and students are required to take a prescribed number of them. Nevertheless, the Core office's prediction system reveals some advantages of centralization.

By describing the Core office's prediction role as “centralized,” we mean that it takes place in a separate office, not subordinate to any department, and that it makes predictions for courses offered by a number of departments and professors.

Such an office could make course enrollment predictions for all courses in the Faculty, or perhaps for a subset of them, such as the humanities, natural sciences, or social sciences. One advantage of this system is that it makes predictions for courses offered by many professors, to whom they are not beholden. This allows unbiased predictions, as there are fewer political influences at play in the prediction process. Another advantage is that it is well acquainted with the professors whose enrollments they predict and has a significant amount of information about their courses. By thoroughly investigating courses, the prediction office can gain a clear understanding of what a particular course will be like, the appeal it will have, and how many students will be likely to take it. Furthermore, a centralized system deals with a wide variety of courses, giving it broad knowledge about courses within its domain.

A centralized prediction office would reduce the work of professors by removing the burden of prediction from them. On the other hand, professors or departments might object to having this task done for them, as they might like to retain control of making enrollment predictions. They may also be opposed to having to provide such an office with early course information, such as syllabi or sample lectures, which would be necessary to acquaint the office with courses in its domain.²¹

4.2.2 Improving Teaching Fellow Hiring

The current TF hiring process is normally done on an individual basis by the departments and by the Core office. Based on the anticipated demand for TFs, departmental course positions are advertised to graduate students in the department and occasionally to students in other departments or schools. Students then express interest in certain courses and the department works with the professors to assign students to TF positions. In smaller departments, the professors may arrange their TF slots on an individual basis. This process is flawed because it does not always provide full information to students, professors, or departments; for instance, students may be qualified for teaching positions outside of their department, yet be unaware of their existence. Two solutions that may improve the hiring process are (1) a centralized hiring information marketplace, and (2) a centralized matching office.

Centralized Hiring Information Marketplace A centralized marketplace for TF hiring could connect graduate students, professors, and departments across the University. Professors or departments would list all TF positions, and students interested in teaching could post their qualifications. Because of the large amount of information involved and the large number of people using such a marketplace, this system would probably be best implemented as a web application. This marketplace could become active even before the specific number of TFs needed for each course is determined.

This system would maintain departmental control over appointments while providing a forum for graduate students to find positions that may suit them. This setup might help in cases in which a graduate student cannot find an appropriate position in his own department but may be qualified to teach a course in another department. Conversely, faculty could locate appropriate TF candidates from other departments if there is a dearth of qualified candidates in their own. Centralized information could reduce confusion and uncertainty, which could lead to fewer instances of late hiring, and would alleviate the matching problem, by allowing graduate students to find more appropriate courses to teach. Furthermore, a common application could be developed, which could streamline the process even further.

Despite the benefits that a centralized hiring information marketplace would yield, the system would require significant development overhead, which, if pro-

²¹In-class discussion with Dean O’Keefe, September 18, 2003.

fessors and students do not widely use the system, may not be worth the effort. Furthermore, since professors and departments might have an inaccurate sense of the number of TFs they need for certain courses, this system still may result in under-hiring and over-hiring which would require the shifting of TFs between courses after classes start. Lastly, graduate students and faculty would likely be averse to using a new system such as this. Some incentive or requirement will be necessary for the marketplace to function effectively.

Centralized Matching Office Another potential solution that might improve teaching fellow hiring is to institute a centralized TF matching office that would handle all TF appointments within FAS. This office would match all graduate students desiring TF positions to appropriate courses. A centralized office would provide the benefits of better information-sharing between departments, at the expense of taking some control of the TF hiring process away from departments and professors.

In the best case, the centralized matching office would obtain accurate predictions of course enrollments and TF needs. It would advertise all open positions to interested graduate students, allowing potential TFs to find out about courses outside of their department. The office would then provide faculty with information about the applicants, and allow professors to rank which students they preferred. The office would then match the applicants to appropriate courses. This process would still use the input of the professor teaching the course, but its ultimate goal would be to provide the best matching between TFs and courses across all departments. The centralized nature of the office would also make it easier to implement a standard policy of TF hiring, which could provide more guarantees and make earlier hires.

The major problem with the use of a central office in making TF matching decisions is that much of the control is removed from the faculty, potentially making them uncooperative. Additionally, a centralized office may lack the specific knowledge necessary to make optimal matching decisions. The individual departments most likely have the best feel for all aspects of their courses, so they may be best able to tend to the teaching needs of these courses. Furthermore, the lack of certainty in enrollment predictions undermines the ability of this centralized office to prevent mistakes in number of hires.

4.2.3 Centralizing Classroom Assignment

In the current system of assigning classroom, each department has control of a certain set of rooms on campus, while a large number of rooms are controlled either by one of several classroom offices or by a centralized building office. The result is that if departments cannot find classrooms within their control in which to teach their courses, they must petition several other offices for classroom space. This system is likely to result in inefficient allotment of space, since departments may control large rooms that they do not need, but which could be useful other departments. An automated, centralized system for assigning classrooms might improve the classroom assignment process. Such a system

would allow professors to view the availability of all the classrooms on campus and to claim a particular room and time.

Centralization would expose the availability of all rooms on campus, thus giving professors more flexibility in choosing rooms appropriate for their courses. Such a system would allow for better matching of a classroom's capacity and resources to the enrollments and needs of each course. Even without full implementation of a centralized office or allocation system, a master list of all available classrooms would alleviate some of the assignment problems.

One hurdle to overcome in implementing this solution would be in the creation of the automated system itself. The administration would need to devise suitable semantics regarding when and how professors can sign up and decide whether or not there will be some sort of priority system, whether there should be a level of human involvement, and similar questions.

4.3 Improving Data Collection and Use

There are several improvements in data management that the administration could make that could alleviate some of the problems we discuss. In particular, as mentioned earlier, historical data could be a valuable tool for providing earlier information on course enrollments. Better data collection, recording, and distributing practices could help with the acquisition and use of this historical data. The changes to current practices that we propose are in (1) information sharing, distribution, and use, and (2) record-keeping.

4.3.1 Information Sharing, Distribution, and Use

The current system for predicting enrollments and hiring TFs could be improved through better information sharing, distribution, and use. Dean O'Keefe said specifically that departments are not sharing the information that would help them predict enrollments; Dean Ellison said the TF hiring problem is fundamentally an "info-sharing problem."

There is already a wealth of information kept by FAS and by various departments, but the potential of this information is going largely unrealized. Most professors, for example, do not realize that their departments get data from the Registrar for the past five school years—information that could be valuable in making enrollment predictions or in deciding how many TFs to hire for the coming semester. In another example, Dean Wolcowitz told us about two departments that were offering similar genetics courses. When one course was bracketed, enrollment rose in the other: an unexpected change for that department, but one that could have been anticipated easily if the necessary information had been shared properly.

Such information could be better dealt with in two ways. First, departments could learn "best practices" from the Core office and other departments that are currently using this type of information successfully. For example, the Core office could demonstrate to departments how its system works and what sorts of data they are keeping, allowing departments to mirror this successful system.

Second, a Faculty-wide system could be put in place to assist departments in maintaining and using this information. Such a system could be a web-based application that would allow departments to easily input and retrieve useful data. The advantages of such a system would be more complete and easily accessible information, both for departments and administrators. Disadvantages would include the cost of implementation and training time on the new system, and convincing the appropriate parties to use it.

The centralization procedures that we discussed above also improve information sharing and distribution. If a centralized enrollment prediction office, centralized TF matching office, and centralized classroom office existed, they could help distribute information between departments.

4.3.2 Record-Keeping

There are significant gaps in the historical data that are currently collected. These data, if appropriately collected, could be used to improve enrollment predictions and lessen the problems associated with enrollment uncertainty. Susan Lewis echoed this sentiment, saying that if departments were more conscientious about keeping track of data and planning ahead, they would experience fewer problems. Two possible explanations for why many departments and the administration do not currently keep such records are that they may find it too difficult to record and retrieve this information, and that they may not realize the potential benefits of keeping and using such information.

Examples of information that could be better collected regularly include course evaluation data, TF hiring data, and predicted enrollments.

Course Evaluation Data Course evaluation data is a great source of information about students' perceptions and opinions of courses. For example, students use the data in the published *CUE Guide* as a resource in determining course selection. In attempting to predict course size, therefore, it seems appropriate to take these data into account, as they provide information that is not otherwise attainable.

Currently, students have access to both the printed and online versions of the compiled *CUE Guide* course evaluation data. However, the actual survey data that is collected at the conclusion of each term is stored in a data format that is fairly inaccessible. The syntax and format of the files storing evaluation data is not well understood by anyone in the administration, and there is currently no means of accessing this information without great difficulty. Furthermore, the format of records varies from year to year. If CUE course evaluation data were stored in a more traditional, modern database, these data would be much more accessible to those hoping to use it.

TF Hiring Data Knowledge of trends gleaned from past TF hiring data could be used to improve the TF hiring process. If a course has had a particular trend in past hiring, such as a large percentage of TFs from a particular department, this trend could be used in targeting potential TFs in the future.

If the past hiring data are matched with TF evaluations, they could help direct marketing efforts about TF positions to the types of TFs that were most successful.

Predicted Enrollments As described in Section 4.1.1.1, departments do a poor job of recording past enrollment predictions. This information could be employed to refine the prediction process and to evaluate the effectiveness of new prediction methods.

4.4 Redefining or Diverting the Problem

We can alleviate several problems that have been pointed out above by rethinking the constraints that define them. By rethinking the constraints, we can possibly make the problems more manageable and expose previously unexplored solutions. We will discuss several examples: enrollment caps, prioritization in TF hiring, flexible section sizes, and CoursePack distribution goals.

4.4.1 Enrollment Caps

Setting an upper bound on course sizes is one means of protecting against unexpected enrollment growth. This would involve creating a system by which professors and departments indicate a maximum enrollment for each course. Assuming a ready supply of teaching fellows, placing enrollment caps on a course would eliminate the problem of having too few teaching fellows due to an unanticipated enrollment increase. Enrollment caps may also help alleviate problems in classroom assignment and textbook availability.

However, this approach does not solve the problems associated with unexpected under-enrollment. That is, since there would be no prescribed minimum enrollment for any course, it would be possible to hire more TFs than necessary for a particular course. Also, enrollment caps may result in students not being able to register for desired courses, representing a major loss of student choice.

4.4.2 Prioritization in TF Hiring

As mentioned earlier, if a teaching job cannot be found for a G3 or G4 student, GSAS is obligated to pay the unearned salary. Currently, some departments give G3s and G4s the highest priority when assigning TF positions, whereas others focus more on qualifications. One potential solution to the problem of paying students who are not teaching is to require every department to hire G3s and G4s first. Such a system may not be viable in all departments, however. If there are more G3s and G4s in a specialized area than there are teaching opportunities, as is the case in the NELC department, there may be no way to match all G3s and G4s to positions even though students from other years may find positions in other sub-areas.

By granting G3s and G4s first priority in hiring decisions, we may be sacrificing optimal fit between the backgrounds of the teachers and the courses they

teach. This could negatively affect the quality of teaching. Furthermore, in guaranteeing positions only to G3s and G4s, we do not eliminate the burden and uncertainty of other graduate students who depend on teaching for their income.

4.4.3 Flexible Section Sizes

Another way to solve the problems in TF hiring would be to broaden the allowable range of students per TF. If a course had too many TFs, sections would simply be smaller than average; if a course had too few TFs, the sections would be larger than average. Such a system would eliminate the need to hire or fire any TFs because of unexpected enrollment figures. However, large section sizes would increase the workload for TFs and decrease the TF to student ratio, while small section sizes would have unnecessarily large TF to student ratios that would waste FAS resources. The tradeoff of consistent teaching quality for an economic guarantee is likely one that the administration and students would not be willing to accept.

4.4.4 CoursePack Distribution Goals

The major problem students currently experience when purchasing CoursePacks is the necessity of multiple trips to obtain their CoursePacks. To improve the CoursePack system, we could find a solution that would guarantee the availability of desired CoursePacks during a student's first trip. A potential solution would establish an ordering system, ideally online, in which CoursePacks are printed on demand. A student would not be able to purchase the CoursePacks ordered by another student, thus guaranteeing that the student who places the order will not make a trip to HPPS only to find that his CoursePacks have been sold to others. The goal of such a system would not be to have a CoursePack available for each student on the first day of class, but rather to minimize the number of trips. This system could be further improved if students order and pay for CoursePacks ahead of time, allowing the lines at the sales counter to move faster, decreasing student wait time. Coincidentally, such a system has been implemented by HPPS for the Spring 2004 semester.

5 A Machine-Learning Solution

As discussed in Section 4.1, having earlier information on course enrollments could alleviate some of the problems we discuss. A machine-learning approach provides one way to get this early course enrollment information. Compared with a survey-based approach, making predictions from historical data has two major advantages. First, it does not depend on information gathered from students' predictions about what they will do in the future, which may or may not be accurate. Instead, a prediction system relies on information that we know to be accurate: records of what courses students have taken in the past. Second, enrollment predictions made from historical data can be re-evaluated at

any time. If a flaw is discovered in the method used to compute the enrollments, it can be tweaked and enrollments can be re-predicted, while a similar change in the approach to a system based on direct student input would require that a new survey be administered.

Given the advantages of a prediction system for early course enrollment information, we chose to investigate the feasibility of such a system. Given the possibility of either a manual system or an automated system, an automated system offers the promise of reducing manpower requirements over a fully manual system, as our research demonstrates that it may be possible for a computer program to perform much of the previously tedious computation involved in the prediction process. In the end, we believe that a mixed approach, taking advantage of the strengths of both a manual and an automatic approach, may work best.

To explore the efficacy of an automatic approach to enrollment prediction, we tested a machine-learning model that draws on a variety of historical data, learns trends from these data, and makes predictions about future course enrollments. In this section, we will discuss (1) the implementation of our model, (2) how we evaluated its performance, (3) its results and the conclusions we draw from them, and (4) suggestions and avenues for future work.

5.1 Implementation

Our machine-learning approach to predicting course enrollments (the “ML system”) was motivated by multiple goals: the achievement of maximally accurate predictions; the incorporation of trends and examples from the past in parameterizing the prediction problem; the comprehensibility of our model, where possible, to a human operator; and the optimal utilization of our large project team during the development stage. In service of these goals, we created a three-stage architecture upon which the ML system is based, depicted in Figure 1.

Our databases, containing historical enrollment data and course evaluation data, form the first stage of the system; these are the sources of information from which all predictions are made. The second stage is comprised of a large set of independent features; each is a simple automated sub-model designed to extract from the data a representation of some particular relevant quality, such as “professor appeal.” The third and final stage is a general machine-learning layer in which feature outputs are combined through the application of a nonlinear function into a single enrollment prediction for each target course. Each of the three stages is described in greater detail in the following pages.

The design of the ML system lends itself to many of our motivating considerations. By employing a general learning mechanism in the final stage, the developers of the system do not manually evaluate the contribution of various factors to the problem of prediction; instead, historical data provide this information in a training phase, discussed below. The automatic evaluation of features thus eliminates the need for human judgments, such as whether students prefer 11am to 1pm as a course offering time. Instead, the ML system learns such tendencies during training, incorporating a large body of historical

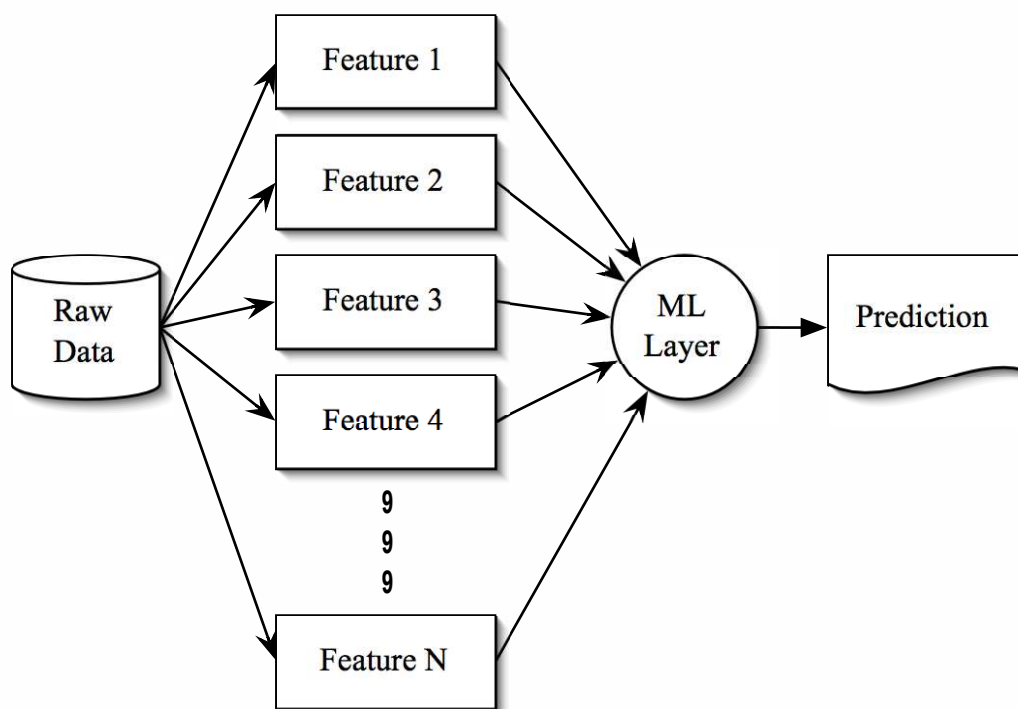


Figure 1: ML system schematic

data in doing so. Secondly, by filtering and dividing the available historical data through feature sub-models, each designed for the extraction of qualitatively cohesive units of information, we ensure that both the inputs (features) and the outputs (enrollment predictions) of the final ML prediction stage have a maximally intuitive interpretation to a human operator. Finally, by distributing the computation of relevant quantities over a set of independent features, a large team of developers is able to work simultaneously on unrelated aspects of the system, bringing it all together only for final testing.

While the design implemented here is general and performs well, it is a compromise between functionality and convenience. Most notably, the system evaluates each target course independently, and is therefore unable to incorporate global constraints; for example, we cannot mandate that total predicted enrollments reach a predetermined value. In practice, however, we find that errors made by the system tend to average out over a large scale, resulting in predicted enrollment totals that are very close to the actual value, despite the lack of an explicit constraint.

5.1.1 Historical Data

Any model used to estimate course enrollment is likely to rely on a considerable quantity of historical data. Our machine-learning model draws from historical course catalog data, enrollment data and course evaluation data.

The course catalog and enrollment information we obtained is maintained in the form of tables of relevant data from the fall of 1993 through the spring of 2003. The data provided are from the Registrar’s records at the end of each semester, so students who withdrew from a course during the semester are not found in the tables. The five main data sets used are the student information, individual course enrollment, course catalog, and the times offered tables, which were provided directly by the Registrar, and the aggregate course enrollment data set, which was constructed using the first four tables.

Student Information The student information contains entries for every student enrolled in Harvard College over the included years. A random, anonymous ID number represents each student. The information provided includes each student’s academic year, concentration, second concentration and previous concentration if available, gender, and advanced standing status. One record exists for each student for every year he or she is enrolled.

Individual Course Enrollment Information The course enrollment data contain information about enrollment in each course offered at FAS over the included years. It specifies the random, anonymous ID numbers of the students enrolled, the course catalog number, the instructor ID number, the term in which it was offered, and a code describing what Core requirement it satisfies, if any. The student ID numbers in this table match those in the student information table.

Course Catalog Information This table includes most of the information made available about each course in the *Courses of Instruction* catalog. This includes the course catalog number, short course title, department number, instructor ID number, instructor name, the term in which it was offered, and its Core code.

Times Offered Information This data set includes information about the meeting days and times of each course. Courses are identified by their catalog number, the term they are offered in and instructor ID number.

Aggregate Course Enrollment Information In order to make the course catalog and enrollment information easier to use, we aggregated the individual enrollment information and built one table containing all the relevant information about a given course: the term in which it was offered, course catalog number, department number, total enrollment, short title, Core code, instructor number, and instructor name. We eliminated courses that undergraduates would not be permitted to enroll in, namely 300/3000 level reading and research courses.

In addition to registrar data, our implementation draws from *CUE Guide* course evaluation data. Working from low-level data files, we constructed a table consisting of the CUE ratings of all courses rated from the fall of 1993 through the spring of 2003. The data we use include the overall course rating, primary instructor rating, difficulty rating, workload rating, number of responses and the term in which the data were published. As these *CUE Guide* data reflect students' assessments of courses, they are useful in providing some way of judging the appeal of a course. For instance, often students choose courses based on the appeal of the instructor. As there is no way for our implementation to directly capture this notion, student evaluations serve as useful substitutes.

5.1.2 Features

Features are designed to extract from the historical data intuitive, quantitative pieces of information that relate to the problem of course enrollment prediction. Every feature produces a set of values for each predicted course; thus, input is a <catalog number, term> pair and output is a vector of variable length, depending on the feature. In computation, a feature may draw upon any information available in the database that was created prior to the term given as input. Therefore, in generating a value for a course offered in the fall of 2000, a feature is allowed to use any data created during the spring of 2000 or earlier, including the 2000-01 Courses of Instruction or *CUE Guide*, assuming that such data can be made available prior to the start of the term if necessary. This restriction ensures that, even though all of our testing was conducted on courses held in the past, feature values will always remain calculable, even when applied to courses that have yet to be offered.

We approximately divide our features into the following four categories: historical/low-level features, *CUE Guide* features, schedule-related features, and

high-level features.

Historical/Low-Level Features

Historical Enrollment Feature Our historical enrollment feature captures the enrollments associated with the course in previous terms. The feature reports enrollment figures from the last time a course was offered, as well as from each of the previous three academic years, if available. When data are not available, an average enrollment of 26 is reported, and a second “flag” value is included to indicate to the learning layer that the value is likely to be unreliable. When no previous enrollment information is available for any year, the flag indicates that the course is new.

Categorical Feature Our categorical feature attempts to evaluate the effect of segmenting the courses into different categories, based on the type of course. This is an important step to take as the specific contributions of other features may depend on the type of course being predicted; for example, professor appeal might be particularly important to students selecting a seminar. This feature was implemented simply by creating six Boolean values, of which only one was set to 1 according to the type of class, and the other five were set to 0. The six types considered are introductory courses, one-hundred-level courses, reading courses, two-hundred-level courses, freshman seminars, and introductory language courses.

Departments Features Our department features attempt to capture two things about our courses; the department the course is offered in, and the last three years’ total enrollment in that department. Giving the machine-learning model such information allows it to find enrollment trends in departments; for example, if the overall number of students taking Government courses have been on the rise, each Government course might expect significant enrollment increases.

CUE Guide Features

Raw CUE Guide Ratings Feature Our raw *CUE Guide* ratings feature attempts to ascertain the effect that the published *CUE Guide* ratings have on enrollments. We believe these ratings are important, as many students refer to the *CUE Guide* to help choose between two or more otherwise similar courses. Therefore, an increase in either the overall or instructor rating, or a decrease in workload or difficulty rating may correspond to an increased interest in that course. In order to incorporate these ratings into a feature, we simply include the ratings printed in the appropriate *CUE Guide*, as well as the difference those numbers and the ratings that were given the previous time the course was offered, when available.

CUE Departmental Feature Our CUE Departmental feature attempts to capture the average workload, professor, difficulty and overall ratings of

other courses within the same department the last time two times each course was offered. This is important because we hypothesize that students often use the *CUE Guide* to compare courses within the same department, particularly when seeking to fulfill a Core requirement or take an elective, to find the most attractive course. For each of the *CUE Guide* ratings mentioned above, this feature computes the mean rating of all other courses in the same department for the last two times the course was offered. Whenever this information is unavailable, for instance, if the course is new, a flag value of is used to indicate this.

Instructor Appeal Feature Our instructor appeal feature attempts to capture any change in the appeal of the course instructor since the last time it was offered. An increase in appeal probably increases enrollment, although we leave the actual determination to the machine-learning model. An instructor's appeal is measured by the mean of his or her *CUE Guide* ratings over all the years of available data, for all the courses he or she taught. This is done for the appeal of the instructor teaching the course for the current term, and the last term the course was rated. If the instructor does not have a rating, or the course is not rated, then the average value for instructor ratings, 4.38, is used. The change is found by subtracting the previous rating from the current rating.

Schedule Related Features

Time Effects Feature Our time effects feature attempts to capture the fact that the time of day that a course is offered affects how desirable that course will be to take. This is an important quality to assess, as very often large swings in enrollment will result when a course changes time. The simplest and most effective way to capture these effects is to return the time that the course is offered as a feature value; for example, on a 10:00 am course the feature would return 1000.

Competition by Time Feature Our competition by time feature attempts to capture the total enrollments of other courses offered at the same or overlapping days and times with a given class. We believe this is important to capture due to the fact that when courses are offered at overlapping times, students often may have to choose between them.

Given a target course, this feature produces two numbers: a sum of enrollments in all other courses that were offered during an overlapping time the last time it was offered; and a sum of predicted enrollments for these same courses during the target year. As part of the process of obtaining the second output noted above, this feature uses a simple formula to predict future enrollments of courses given historical figures. The formula simply uses the difference in enrollments between the last two offerings as the predicted difference between the last offering and the present one.

High-Level Features

Trends Feature Our offering trends feature attempts to describe where in an offering trend cycle a given course may be. This is useful to predict enrollments of courses that have certain offering patterns. For instance, a course that has not been offered the past two years, but will be offered this year, may be more likely to receive large enrollments than a course that has been consistently offered. This feature considers only the past 6 terms, as well as the current term and the next term if that information is available. (For fall courses, we can determine whether they will be offered in the spring from their catalog data.) For each term, if the course is not offered, the likelihood of students enrolling in the current term may increase. The effect of this pattern may weaken the further away the term is from the current term. Also, if a course is not offered next term, then its likelihood of attracting enrollment might increase in anticipation of this bracketing. The offering trends feature is built around these intuitions.

Consider a course, offered in the current term, which will not be offered next term and has the following offering pattern for the past six: offered, offered, not-offered, offered, not-offered, not-offered. This pattern is first represented as a binary number: 11010010. Then for each digit starting from the left, if it is 0 we add $([\text{number of terms considered}] - [\text{position relative to present term}] + 1)$ to the result, to account for the possible change in impact over time: $11010010 = 0 + 0 + 3 + 0 + 5 + 6 + 0 + 8 = 22$. If the bracketing status for a given term is unknown, then an average of possible values is used. For instance: $1101001x = 0 + 0 + 3 + 0 + 5 + 6 + 0 + 4 = 18$.

Sequencing Feature Students do not choose courses at random; often they follow one of many basic course sequences. For instance, students who take Computer Science 50 (CS50) one year are likely to take Computer Science 121 (CS121) the next. Our sequencing feature attempts to capture this common effect by automatically identifying a predictor course for each target course, and using its recent enrollment history to predict the enrollment of the target course.

In order to determine the most appropriate predictor course for a given course, we compare the enrollment history of that course with every other course, specifically focusing on the percent changes between years. For each of the last four years, we sum the differences between the percent change of each potential predictor course for the previous year and the percent change of the target course for the given year. The feature selects the course that minimizes this sum as the predictor course for the target.

For example, if the target course has the following enrollments

	1997	1998	1999	2000	2001	2002
Target:	50	40	45	90	60	120

then its percent changes are

	1997	1998	1999	2000	2001	2002
Target:	-20%	13%	100%	-33%	100%	

Consider two prospective predictor courses with the following enrollments.

	1997	1998	1999	2000	2001	2002
Predictor A:	40	30	25	75	90	95
Predictor B:	100	110	190	160	300	275

Their percent changes are

	1997	1998	1999	2000	2001	2002
Predictor A:	-25%	-17%	200%	20%	6%	
Predictor B:	10%	73%	-15%	88%	-8%	

Thus, the score for Predictor A is $|-25 - 13| + |-17 - 100| + |200 + 33| + |20 - 100| = 468$; while the score for Predictor B is $|10 - 13| + |73 - 100| + |-15 + 33| + |88 - 100| = 50$. Therefore, from our score, we see that Predictor B is a much better predictor of the target course. Looking at the enrollments, this matches our intuition, as Predictor B appears to change enrollments in a very similar way to the target course, but one year earlier.

The main benefit of automatically choosing predictor courses in this manner, as opposed to hard coding known course sequences, is that courses may predict other courses well, even if they are not part of an official concentration track. Therefore, by proceeding in this manner, we are able to extract useful predictor information for all courses, instead of merely a small sample of lower level concentration requirements.

We restrict selection of the predictor course in two ways, to ensure its usefulness: it must predict for at least two years to ensure significant correlation, and the overall score must be below a predefined maximum, so that no unrelated course will be chosen by default. Despite these restrictions, predictor courses were found for the majority of courses, while the remaining courses were assigned themselves as predictors by default.

Using predictor courses to predict the enrollments of target courses is straight-forward. First, the feature finds the percent change in enrollment for the predictor course. Next, the average error of the past predicted changes is calculated, and the predicted percent change is adjusted accordingly. Finally, this percent change is applied to the previous enrollment of the target course, resulting in an enrollment figure returned as the feature value. If no suitable predictor course is found, then the past enrollment of the target course is used as the feature value.

For example, the best predictor course for CS121 was found to be CS50, which underestimated the percent change in CS121 by 2%, on average.

Thus, for predicting the 2000 offering of CS121, first the prediction change of CS50 between 1998 and 1999 years was found to be 9.35%. This was increased by 2% to 11.35%, and applied to the 1999 enrollment of CS121 (104 students) to give a feature value of 115.8 students. The actual enrollment of CS121 in 2000 was 117. Thus, in this instance, the feature proved to be very helpful, as it was able to extract some of the only concrete early enrollment information available in the data.

5.1.3 Learning

Our machine-learning layer operates in two major phases: training and prediction. In the training phase, the system is fed a series of historical examples, including all generated feature values as well as actual course enrollments. Parameters of the system are then tweaked until it can accurately predict past enrollments based on feature values; the result is a nonlinear function from features to enrollments. If the process is successful, the learned function not only predicts past courses, but also effectively incorporates the information available in feature outputs and therefore generalizes to predict courses offered in the future. If, for example, all courses that have moved from an afternoon time slot to an early morning time slot in the past have experienced decreased enrollments, the system should learn to “use” the time appeal feature to predict such an effect for courses in the future.

Once we complete the training phase, prediction can occur. In this phase, historical examples are passed without actual course enrollments, and the system applies the learned function to the feature values to generate enrollment predictions. From these results we can evaluate the performance of the system, as we do in Section 5.3.

Specifically, our learning layer is known as a Support Vector Machine (SVM), a standard machine-learning construct. In general, a number of fast algorithms exist for learning linear functions, but in many cases, such as ours, linear functions do not provide adequate expressiveness; that is, we cannot predict enrollments merely by combining our features linearly. Therefore, some method for learning nonlinear functions is required. The problem of learning arbitrary nonlinear functions includes at least two major difficulties: achieving efficiency and avoiding overfitting. Efficiency requires that we have some reasonable way of searching the space of potential functions, which may be very complicated. Overfitting refers to a lack of the generalization mentioned earlier with respect to training: we can successfully predict all historical courses by merely memorizing their enrollments; this function, however, is not helpful when we wish to predict the enrollments of courses in the future. Therefore, to avoid overfitting during training we must produce a function that is not only predictive for historical courses, but also as “general” as possible.

SVMs rely on the use of kernels—functions that calculate dot products of data points under some mapping, which may be complex and nonlinear—to solve both problems. Standard optimization equations for producing linear functions can be rewritten to use kernels instead of standard dot products, thus providing

the necessary framework for learning functions that are linear only after some nonlinear mapping. In other words, the functions can be general and nonlinear, depending on the kernel used. Because kernels directly compute dot products in the alternate space without actually mapping points to that space, they keep the training problem tractable: a quadratic optimization with no local minima. Furthermore, because the optimization is written as a linear function in some alternate space, we can specify “generality” in a principled way as finding the flattest linear function, or minimizing the norm of the coefficient vector. The reader is referred to Smola and Schölkopf for more details on using SVMs for regression.²² We have used the machine-learning library Torch3²³ as the basis of our SVM implementation; for more details on our training process, please see Section 5.2.2.

5.2 Evaluation

The following section describes how we evaluate the performance of the ML system. It describes two baselines we use for comparison, the training set for the baselines and the ML system, and the metrics we use for measuring our predictions.

5.2.1 Baselines

We evaluate our ML system against two baselines. The first is a human baseline, consisting of manual predictions for the enrollments of 73 courses offered in the fall of 2003. These predictions were made by seven departments—Anthropology, English, History, German, Government, Philosophy, and Sociology—in the spring of 2003 and delivered to Dean O’Keefe in order to obtain guarantees on teaching funds for the upcoming semester. The 73 courses predicted are of limited scope and low in number, so the results obtained from the human baseline cannot be considered strictly comparable to those obtained from the ML system. Nevertheless, we provide these results because they are our best available approximation of human performance on the task of course enrollment prediction.

Our second, automatic baseline is designed to approximate both the simplest reasonable automatic system that might be implemented and the prediction methods utilized by most departments.²⁴ It predicts that courses previously offered will have enrollments equal to those of the last offering, and that new courses will have 26 students, the mean enrollment of all courses. Because it is fully automated, the second baseline can be used to predict arbitrary sets of courses, and therefore the results for this baseline are directly comparable to those of the ML system.

²²A.J. Smola and B. Schölkopf. A tutorial on support vector regression. NeuroCOLT2 Technical Report NC2-TR-1998-030, 1998. <http://citeseer.nj.nec.com/smola98tutorial.html>.

²³R. Collobert, S. Bengio, and J. Mariéthoz. Torch: a modular machine learning software library. Technical Report IDIAP-RR 02-46, IDIAP, 2002.

²⁴Interviews with various department administrators.

5.2.2 Methods and Parameters

The human baseline is evaluated on its performance over the 73 courses for which we have data, all from Fall 2003. Both automatic systems are evaluated over all 2,340 FAS courses offered during the 2002-2003 academic year, excluding courses denoted as exclusively graduate-level (300/3000 level). New course evaluations are made only for the automatic systems, and consider the precisely 600 new courses offered during the 2002-2003 academic year, a subset of the full evaluation set.

The training set for the ML system consists of all 10,607 courses offered from academic years 1997-2001, again excluding graduate-only courses. Though data back to 1994 is currently available, we have limited the extent of our training data because many features rely on historical information in generating their outputs. Thus, we include courses no earlier than 1997, and guarantee at least three years of potential historical data on each course for which a feature vector must be calculated. This helps to ensure the semantic consistency of our features.

For training the SVM of our ML system, we utilize a Gaussian kernel, which produces, in theory, a universal approximator. We select parameters ϵ , the acceptable margin of error, C , the slope of the cost function outside the error margin, and σ , the standard deviation of the Gaussian kernels, through a progressive grid search using a validation set consisting of all 2,263 courses offered during academic year 2001-2002. The quadratic constraint problem is optimized until the Karush-Kuhn-Tucker conditions are satisfied to within an accuracy of 0.01.

5.2.3 Metrics

We evaluate our system with respect to two metrics. The first, Expected Teaching Fellow Error (ETFE), refers to the expected difference between the predicted number of teaching fellow slots and the actual number of slots for a randomly selected course. These estimates are based upon predicted and actual enrollments assuming an ideal section size of 15 and one section per TF: $\#TFs = \max(1, \text{round}(\text{enrollment} / 15))$.

Therefore, if we predict enrollments of 150 for a course that ends up with 180 students, the actual number of required TFs (12) indicates that our prediction (10) has an ETFE of 2. This metric is clearly useful in calculating the average number of TFs that will need to be hired, fired, or otherwise reassigned when enrollments are finalized.

Our second metric, Expected Section Size Deviation (ESSD), attempts to address a potential weakness of the first metric: If we err by a single TF for a large course, the excess or missing students might be reasonably distributed among other sections. The result would be slightly larger or smaller section sizes, but, potentially, would avoid the need to actually hire or fire the marginal TF. However, for small courses, an error of a single TF might be much more dramatic, and there would be no reasonable way to accommodate sections with-

out adjusting the number of hired TFs. Therefore, ESSD attempts to capture the effect of the over- or under-prediction if TFs are not hired or fired after classes begin. To do this, we calculate the section size that would result if the predicted number of TFs were maintained regardless of actual enrollment. For the same example as above, our prediction of 150 students would require the hiring of 10 TFs; if the actual enrollments turn out to be 180, we distribute them among the 10 TFs, resulting in a section size of 18. Since our ideal section size is 15, this corresponds to an ESSD of 3.

5.3 Results and Conclusions

When applied to the actual task of predicting course enrollments, the results below demonstrate the impressive ability of an ML system to solve some of the problems currently associated with hiring TFs. The following chart summarizes our evaluation of the success of the different enrollment prediction methods:

		Human Baseline	Automatic Baseline	ML System
ETFE	All Courses	1.341	0.716	0.361
	New Courses		1.122	0.381
ESSD	All Courses	6.37	4.89	2.62
	New Courses		11.32	4.88

The comparison is depicted graphically in Figure 2.

We can illustrate the significance of these results by applying them to the problem of inaccurate TF hiring. If the human baseline, based on human predictions for 73 courses in one semester, is a good approximation for predictions across FAS as a whole, then ETFE is 1.34. Since there are approximately 1200 courses offered each semester, this means that there would be 1608 misallocated TF slots per semester. Based on an average of 1.5 sections taught per graduate student, this is equivalent to 1068 TFs that must be hired or fired after the first week of class. Since the ETFE for the ML system tested was 0.36, we can expect that only about 432 sections would be misallocated using such predictions—affecting only 288 TFs. This represents an improvement of 780 GSAS TFs over the predictions from the human baseline.

The current ETFE is probably not as large as the human baseline suggests. It seems unlikely that the automatic baseline would predict significantly better than a human baseline. When the automatic baseline is computed for the 73 courses used in the human baseline, it performs comparably. Therefore, we will use the automatic baseline to provide a more accurate representation of how faculty and departments currently predict course enrollments.

The ETFE of the automatic baseline is 0.72, meaning that about 864 sections would be misallocated each semester if all courses were predicted to have the same enrollment as the last time they were offered; this comes out to 415 affected TFs. Comparing again to the ML system, 127 fewer TFs would be affected using predictions from the ML system than from the automatic baseline.

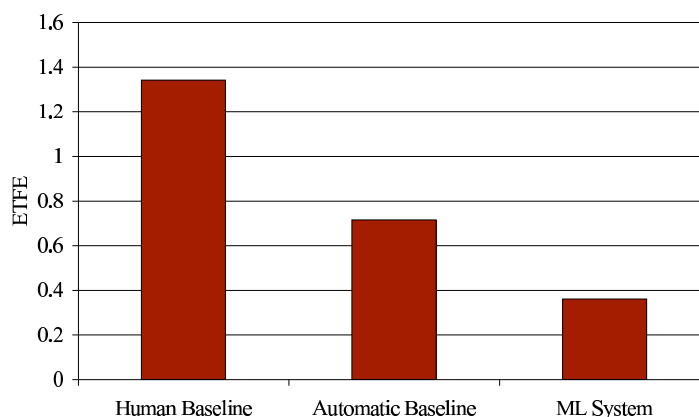


Figure 2: Expected teaching fellow error for the three tested methods.

Having examined the cost of remedying the misallocation problem, we can use our second metric (depicted graphically in Figure 3) to examine the cost of ignoring it. The ESSD of the automatic baseline is 4.89, indicating that we can expect typical section sizes to range from 10 to 20 students. The ESSD of the ML system, however, is only 2.62 students, representing a 46% improvement over the automatic baseline. This results in an expected section size between 12.4 and 17.6 students, a much more reasonable range.

On new courses, the ML system performs reasonably well, with an ETFE only 5% higher than that of all courses, and an ESSD comparable to that of the automatic baseline’s prediction for all courses, as shown in Figures 4 and 5. This is particularly impressive considering new courses lack much of the historical data the ML system bases its predictions on.

Compared against either the human baseline or the automatic baseline, the ML system demonstrates a significant improvement. If applied properly, this could dramatically affect TF hiring practices, allowing TFs to be hired more securely before the semester begins.

For example, in considering the problem of making TF position guarantees to G3s and G4s in the humanities and social sciences, the potential to ameliorate the situation becomes even clearer. Because of the financial aid status of G3s and G4s, we attempt to ensure them teaching positions. They make up about half of the TF applicant pool,²⁵ so if we can guarantee 50% of teaching positions before the semester, we can approximately cover the teaching requirements of these students.

Figure 6 shows how many excess TFs will be hired if a given percentage of TF slots are guaranteed. This was computed by “guaranteeing” various percentages

²⁵In-class discussion with Dean Ellison, September 23, 2003.

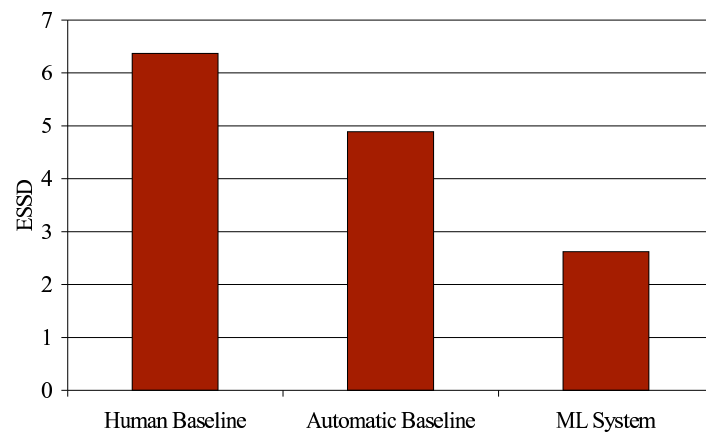


Figure 3: Expected section size deviation for the three tested methods.

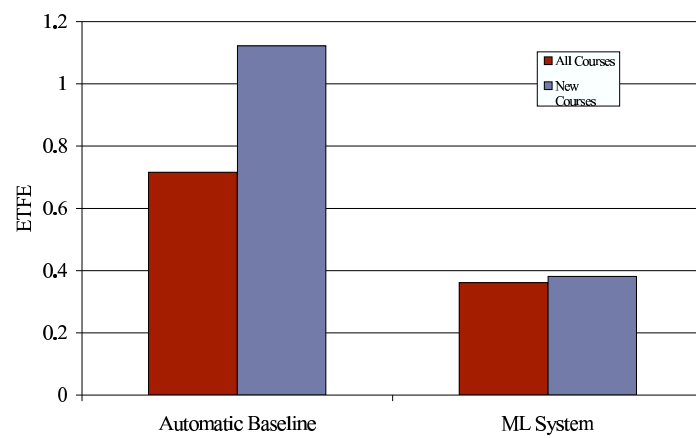


Figure 4: Expected teaching fellow error on all courses and on new courses.

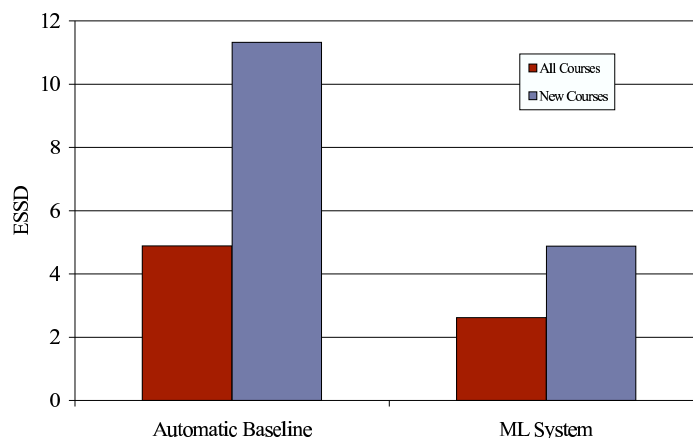


Figure 5: Expected section size deviation on all courses and on new courses.

of the TF slots in humanities and social sciences predicted by the ML system and comparing these guarantees to TF needs based on the actual enrollments. The guaranteed slots that proved expendable are shown in Figure 6.

As the graph shows, it would be possible to hire 50% of the TFs needed to teach the number of students predicted by the ML system for humanities and social science courses while only over-hiring 11 TFs—an exciting result. This number is almost low enough to be negligible. One would expect that this handful of TFs could be matched up with other courses when classes began; if so, and assuming that the pool of graduate student talent in a given semester matched the qualifications necessary to teach the courses offered, this would allow GSAS to meet all its G3 and G4 teaching guarantees.

5.3.1 Error Analysis

Despite our best efforts, there are occasionally situations in which our automated system produces predictions that are dramatically incorrect. However, these predictions are often not as worthless as they first appear to be. Many of our large errors fall into one of two categories: either the prediction correctly foresaw a significant change in course size and simply did not predict a large enough difference or the incorrect prediction could be easily corrected by a simple manual review of the output. Both of these types of errors are instructive. The first type indicates a large swing in enrollment, even if cannot correctly determine its magnitude. The second type illustrates the need for human judgment in the prediction process.

The most obvious example of the first type of error occurred when we attempted to predict the enrollment of Afro-American Studies 10. Up until the

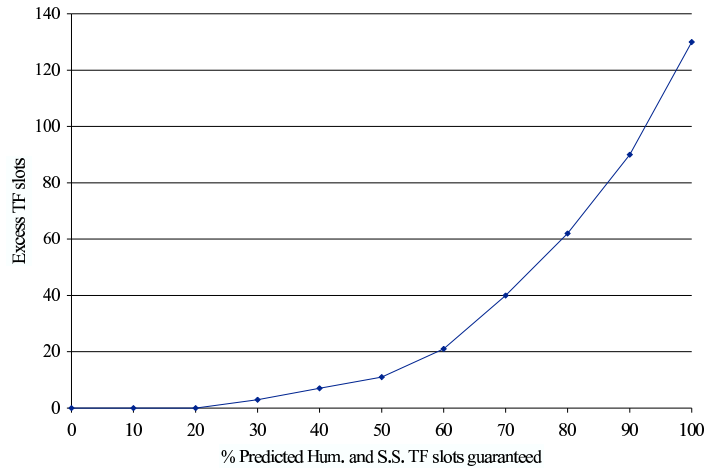


Figure 6: Overhiring as a result of guaranteeing a fixed percentage of predicted teaching fellow need.

2000-2001 academic year, the instructor was Cornel West, a popular professor who regularly attracted an enrollment of around 350 students. However, in 2001, the course was taught by a different instructor; enrollment suffered, dropping dramatically to 110. The next year, Prof. West returned and the enrollment skyrocketed to 584. Our prediction for the 2002 offering was 355. Although our prediction was well off in absolute terms, it is significant that our system predicted a tripling of enrollment from the previous year. It was able to detect that Prof. West was returning, due to the instructor appeal feature, and consequently predicted a large increase in enrollment. While the exact increase was not obtained, this projected number could still have served as a useful guide to faculty and administrators, signaling that a large jump in enrollment should have been expected.

As a more general point, this type of error demonstrates the extent to which the predicted values may be useful, even if the exact numbers are not correct. For example, every time that a course enrollment was predicted to rise or fall by at least 50%, the actual enrollment rose or fell accordingly over 75% of the time. Large leaps can frequently be predicted. For example, 84% of courses with over 30 students enrolled that we predicted to at least double in size actually did, and those that did not double all increased their enrollments by at least 50%. This type of information also seems to be useful in the instances in which it is most necessary: predicting the enrollments of new courses. We correctly predicted whether or not a new course would have more students than an average sized course over 90% of the time. More importantly, we correctly predicted whether

or not a new course would need more than one TF 83% of the time. From these examples, we see that our enrollment predictions, even when inaccurate, provide useful qualitative information.

The second type of large error occurred due to incorrect or incomplete information. Government 97a and 97b provide an illustrative example. These were new courses in the 2001-2002 academic year, for which our system predicted 5 and 20 students respectively. Unbeknownst to the system, these courses were new tutorials, required of all sophomore government concentrators. Therefore, they received enrollments of 217 and 213 students respectively. A manual review process would have seen that the enrollments for either one of these courses should be approximately that of the number of sophomore government concentrators.

Another example is that of Psychology 1503. Our system produced a prediction of 604 students for this course, which would have been an obvious error to a human observer, as very few non-introductory, non-Core courses have such high enrollment. Upon further analysis, it is evident that the problem stemmed from the practice of recycling course catalog numbers after a certain period of inactivity. The course catalog number for Psychology 1503 had been used several years ago for a small Government course. Therefore, our system believed that the jump in enrollment from this small course, with an enrollment of 4, to the larger Psychology course, which had an enrollment of 110 the first time it was offered, occurred within a single course offering interval, and so was representative of that course's trend. Thus, in the following year, the large prediction of 604 was given, while actual enrollment only grew modestly to 136. A manual review would have been able to immediately perceive the error of the enormous prediction, and adjust the projection accordingly. Additionally, as such mistakes are discovered, the features and data can be refined to avoid similar errors in the future.

Therefore, we can conclude that large errors can still be useful for illustrating alternative ways of utilizing the predictions. They demonstrate the need for a basic manual review in order to adjust any predictions that are obviously far off and to watch for cases where the relevant information could not be captured in the system, or may be incorrect. These large errors also illuminate the usefulness of the prediction data beyond simple raw numbers. Less precise, qualitative information, such as the direction of change in the enrollment of a class, can be gleaned from the predictions and used as a guide for administrators and faculty. As was shown, this information can be very accurate, especially in the troublesome cases of obtaining estimates about new courses.

5.4 Future Work

From our investigation into a machine-learning approach for automatic course enrollment prediction, we have been able to assess different methods that are useful for predicting course enrollments. Though not all of our ideas proved successful, and even those that did need further improvement, we were able to gain extensive knowledge about methods and data which would be useful to

anyone who wishes to further pursue this problem.

Our approach has allowed us to identify those features that are most helpful in obtaining accurate information about future enrollments. The most important feature is that of the past enrollment history of a course. Without this information, making reliable predictions is very difficult, as it is hard to find an accurate reference point. The second most helpful feature is the course predictor feature. This feature exploits the predictable patterns in student enrollment sequences, incorporating enrollment history, to produce even more accurate results. The third most helpful feature is the categorical feature, which categorized the courses according to type. Since different types of courses behave differently, it is important for the model to be able to tell the difference. All other features produced lesser benefits, though collectively remain important contributors. Therefore, anyone designing a future model for predicting early course enrollments should take these factors into account, and use them to inform future feature design.

From a methodological perspective, we were able to determine which design features were most helpful for us, and should be considered in future systems. Most importantly, by partitioning the system into an independently operating machine-learning layer and many different sub-models that produce the feature values for learning, we provide the system with invaluable flexibility. As the specific implementation of the machine-learning algorithm can be changed without affecting the functioning of the feature sub-models, we were able to test a variety of algorithms to determine the most effective. The other important design feature is the division of feature development into separate sub-models. By allowing each feature model to be implemented separately, multiple avenues could be pursued in parallel, allowing many promising ideas to be investigated simultaneously. Both of these design features were helpful in producing an effective ML system and any future system would most benefit from incorporating them.

There were several factors which might have improved performance in our system, had we been able to implement them. First, given the importance of the categorical feature, it would probably have been beneficial to train entirely different models for each type of class. Additionally, instead of investigating all courses, those where enrollment predictions are most needed could be isolated and the model designed exclusively for those courses. In this way, a less general but ultimately more useful model could be developed.

6 Recommendations

Our research has illuminated many of the issues raised by the discussion of early course selection. Having considered numerous potential solutions to address these issues, we now offer recommendations on how each of the principal issues should be addressed: (1) teaching fellow hiring; (2) classroom assignment; (3) CoursePack availability; (4) textbook availability; and (5) academic advising.

6.1 Teaching Fellow Hiring

There are two principal goals to achieve in addressing the TF hiring issue. The first is to make appropriate teaching fellow positions available to all G3s and G4s in the humanities and social sciences. The second, more general goal is to improve the TF hiring process. There should be a standard, efficient means of matching graduate students to teaching positions: faculty should be able to find qualified graduate students easily, and likewise potential teaching fellows should be able to find information about available positions easily.

In light of these goals, our first recommendation is the creation of an information marketplace to facilitate communication between faculty and graduate students. As described, the marketplace would likely take the form of a website where faculty can post information about available teaching fellow positions and potential teaching fellows can post their qualifications. This system would improve matching of TFs to courses, particularly across departments.

Our second recommendation is to improve the gathering and distribution of relevant information. The most important improvement would be the recording of course enrollment prediction data. All departments should be required to make enrollment predictions and these predictions should be recorded in a central location. Prediction information is useful for estimating the number of teaching fellows to hire, but more importantly, it serves as a basis for comparison against other methods of obtaining early enrollment information. For example, an early course selection system could be compared against these predictions to see which method more accurately predicts enrollment. As long as historical prediction data do not exist for most courses, there is no baseline against which to measure any new method of prediction.

Similarly, all data relevant to TF hiring should be standardized, both in terms of the type of data that are stored, and the format in which they are stored. Currently, utilizing certain collected data is difficult because they are not easily accessible. Once standardized and collected, these data, including past predictions, past enrollments, historical TF hiring statistics, and past TF evaluations, should be made available to faculty and administrators so that they may make better-informed decisions.

Our final recommendation is the creation of earlier enrollment information through two means: a machine-learning model and a mandatory, nonbinding survey. We recommend using a machine-learning application similar to the prototype we developed to generate course enrollment predictions for all FAS courses. These predictions should be used to guarantee a certain percentage of teaching positions to cover the number of G3s and G4s in humanities and social sciences. Additionally, the automatically generated predictions, lightly revised by a manual review, should be distributed to faculty and administrators to aid them in course planning.

Concurrently, we recommend a mandatory, nonbinding survey—implemented on a trial basis—as a means of collecting early enrollment information from students. This trial would allow administrators to assess the value of the information gained from such a survey and would provide

additional information to be used in making manual predictions. Additionally, the survey could provide a baseline for future attempts at predicting course enrollments, in lieu of the absent historical prediction data.

6.2 Classroom Allocation

Because our understanding of the full situation has been limited by our inability to gain permission to interview the Classroom Office, we do not believe we know enough to make definitive recommendations. Instead, we make conditional recommendations, based largely on anecdotal evidence.

The problem we would like to solve is the inefficient matching of courses to classrooms, necessitating room changes or lotteries after the beginning of the term. Our goals are to improve assignment of classroom facilities so this would not be as necessary and to make information about available instructional space more widely available.

To address some of the difficulties associated with finding information about available classrooms, we recommend the creation of a master list of all FAS instructional space, indicating the size, location, controlling office, available resources, and support personnel associated with each room. Currently, we believe that professors and even departmental staff are unaware of all the instructional spaces available to them; this list would help alleviate this problem.

We expect that early course enrollment information would also improve classroom allocation. Even if not completely accurate, this information would decrease the frequency of course lotteries and reduce the number of classroom changes, as courses could be more reliably assigned to rooms they fit in.

6.3 CoursePack Availability

Our recommendations regarding CoursePack availability seek to achieve two goals: eliminate needless trips to the HPPS office made by students and reduce the duration of the wait in line when purchasing a CoursePack. The excessive trips and long wait in line were the two primary student complaints indicated in the results of our undergraduate student survey.

We recommend enabling students to order and purchase CoursePacks in advance, preferably through an online ordering system. Such a system would ensure CoursePack availability once a student requests a copy, eliminating the need to make multiple trips to HPPS. Furthermore, since CoursePacks would be purchased in advance, no transaction would need to take place when a student picks up a CoursePack, reducing the amount of time spent waiting in line.

HPPS recently arrived at a similar conclusion regarding distribution policy and has been advertising its plans to implement a system similar to the one described here.²⁶ Their new system will debut in February 2004.

²⁶<http://www.thecrimson.com/article.aspx?ref=356980>

6.4 Textbook Availability

The principle goal to be achieved in addressing the textbook situation is to make textbooks readily available to students, minimizing the likelihood of textbooks running out of stock. As previously described, acquiring textbooks is not considered very difficult by most students, but it does present a challenge for textbook suppliers. Suppliers, particularly the COOP and the Harvard College Library, must stock sufficient supplies of each textbook before the academic term by estimating demand.

We recommend that more early information be shared between relevant textbook suppliers and FAS. Faculty must make information about required texts available early enough to allow suppliers sufficient time to order and stock the appropriate textbooks. If possible, more accurate predicted enrollment numbers should be sent to these suppliers, possibly qualified with information about the importance of particular textbooks and the expected number of textbooks that will be purchased.

The COOP, as we described earlier, is the primary supplier of textbooks for undergraduates, but we were not able to learn specific information about its textbook purchasing and stocking policies. Without this information, we cannot make more detailed recommendations.

6.5 Academic Advising

The primary problem with advising we uncovered through our undergraduate and faculty surveys was the lack of a meaningful relationship between students and faculty advisors. None of the potential solutions we explored, however, address the academic advising problem. Even moving mandated faculty-student conversations earlier, as suggested in the discussion document, seems unlikely to improve the problems with advising we identified.

As the issue of academic advising is orthogonal to the others we discuss, we recommend a more comprehensive, isolated examination of the advising problem to explore other avenues through which the current advising system can be improved.

7 Conclusions

Our extensive research into the issues raised by discussion of early course selection has enabled us to derive several important conclusions. We have demonstrated that a machine-learning model can be an effective means of generating early course enrollment information. Further research and a professional implementation of such a model would likely improve prediction results; however, our prototype serves as an excellent proof-of-concept to demonstrate that machine learning can be used to generate useful predictions and that such a model can be feasibly implemented.

We believe that early course enrollment information, regardless of how it is derived, would greatly ameliorate many of the problems associated with TF

hiring. In particular, we have shown that early enrollment information could enable GSAS to guarantee a percentage of teaching fellow positions equivalent to the number of G3s and G4s in the humanities and social sciences. Additionally, we believe early course enrollment information could help reduce course lotteries, classroom changes, and insufficient textbook supply.

Finally, although we believe that early course enrollment information would ameliorate several problems, we have found that none of the principal issues raised by the discussion of early course selection would be solved by this information alone. Each of the principal issues we have examined is complex, with many underlying causes and no perfect solution.

A Glossary

Shopping Period: (taken from <http://hcl.harvard.edu/lamont/resources/lingo.html>) The first five days of an academic term at Harvard, before Study Cards (see below) are submitted for formal enrollment in a course, when students can visit classes, sit in on lectures, and review syllabi and readings.

Study Cards: (taken from <http://hcl.harvard.edu/lamont/resources/lingo.html>) Course enrollment forms, which students must formally submit to the Registrar's office, with signatures of their advisors and in some instances, course instructors. The deadline for doing so is referred to as "Study Card Day." Freshmen turn their Study Cards 7 days after classes begin; upperclassmen turn their study cards in 5 days into the academic term.

Early Course Selection proposal: The document submitted by Jeffrey Wolcowitz, Arlene Becella, and John O'Keefe on January 30, 2003 outlining a new system for selecting courses. It can be found here: <http://www.courses.fas.harvard.edu/~cs96/Papers/wolcowitz.early-course-selection.pdf>.

Preregistration: A system under which students would indicate their intended courses the semester before they would be taking the classes. For the purposes of this document, preregistration is the specific plan outlined in the Early Course Selection proposal.

Teaching Fellow (TF): (adapted from <http://hcl.harvard.edu/lamont/resources/lingo.html>) TFs at Harvard may teach sections, conduct tutorials, grade assignments, supervise undergraduate projects, and so forth. For the purposes of this document, TF refers to all Teaching Fellows, Teaching Assistants, and Course Assistants.

G3 and G4: G3s are third year graduate students. G4s are fourth year graduate students.

Faculty of Arts and Sciences (FAS): The Faculty of Arts and Sciences encompasses Harvard College, the Graduate School of Arts and Sciences (GSAS), the Division of Engineering and Applied Sciences (DEAS), and the Division of Continuing Education (DCE). FAS has 997 professors and 11,000 students.

Maternal Science: A science, such as biology, chemistry, or physics, that deals with the objects, phenomena, or laws of nature and the physical world.

Social Science: Scholarly or scientific disciplines that deal with the study of human society and of individual relationships in and to society, generally regarded as including sociology, psychology, anthropology, economics, political science, and history.

Humanities: Those branches of knowledge, such as philosophy, literature, and art, that are concerned with human thought and culture; the liberal arts.

B Departmental Contacts

The following is a list of the department representatives we contacted:

Department / Division / Degree Program	Contact Person	Type of Contact
Chemistry and Chemical Biology	Nathan Goldberg	Interview
Division of Engineering and Applied Sciences	Susan Wieczorek	Interview
Earth and Planetary Sciences	Chenoweth Moffatt	E-mail
East Asian Languages and Civilizations	Frankie Hoff	E-mail
Economics	Debbie Whitney	Interview
Environmental Science and Public Policy	Professor James McCarthy	E-mail
Folklore and Mythology	Holly Hutchison	E-mail
Government	Thom Wall	E-mail
History of Art and Architecture	Deanna Dalrymple	Interview
Linguistics	Mary Violette	E-mail
Mathematics	Ruby Aguirre	E-mail
Music	Nancy Shafman	E-mail
Near Eastern Languages and Civilizations	Kathleen Coultier, Jennifer L Petrallia	Interview
Philosophy	Ghanda DiFiglia	E-mail
Psychology	Elizabeth Lambert	E-mail
Religion	Professor David Hall	E-mail
Sanskrit and Indian Studies	Ali Asani	Interview
Sociology	Susan Washington	Interview
Statistics	Betsey Cogswell	E-mail
The Classics	Teresa Wu	E-mail
Visual Environmental Studies	Michael Lawrence	Interview
Women's Studies	Kath Weston	Interview

C Survey Results

The following are the results of the surveys we administered to College students, graduate students, and faculty. Where possible, these include an aggregate of the responses to each question; however, the data collected on some questions did not lend itself to this sort of aggregation. Other interesting results have been included where possible.

C.1 College Student Survey

A total of 863 responses were received from a student body of approximately 6,500, for a sample size of 13.3%.

1. What is your current year in school?

Freshman	167	(19%)
Sophomore	268	(31%)
Junior	222	(26%)
Senior	205	(24%)
5th year +	1	(<1%)

2. What is your concentration? (We asked about joint concentrations, but because those in some cases uniquely identify the respondent, we include here only the first field given in these cases.)

Afro-American Studies	6
Anthropology	24
Applied Mathematics	14
Astronomy and Astrophysics	7
Biochemical Sciences	37
Biology	43
Chemistry	25
Chemistry and Physics	3
Classics	9
Comparative Study of Religion	8
Computer Science	25
Earth and Planetary Sciences	11
East Asian Studies	2
Economics	85
Engineering Sciences	17
English and American Literature and Language	40
Environmental Science and Public Policy	12
Folklore and Mythology	4
Government	77
History	36
History and Literature	22
History and Science	24
History of Art and Architecture	3

Linguistics	6
Literature	6
Mathematics	15
Music	10
Philosophy	5
Physics	25
Psychology	64
Romance Languages and Literatures	9
Sanskrit and Indian Studies	1
Slavic Languages and Literatures	3
Social Studies	51
Sociology	10
Statistics	3
Visual and Environmental Studies	15
Women's Studies	1
Special Concentration	9
Undecided	96

3. Please select the frequency with which you obtain *textbooks* from the following distributors:

	Often	Sometimes	Rarely	Never
COOP	560 (65%)	186 (22%)	91 (11%)	26 (3%)
Harvard Book Store	26 (3%)	123 (14%)	191 (22%)	523 (61%)
Schoenhof's	33 (4%)	98 (11%)	201 (23%)	531 (62%)
Online Vendor	254 (29%)	222 (26%)	141 (16%)	246 (29%)
Library	102 (12%)	212 (25%)	260 (30%)	289 (33%)
From Other Students	56 (6%)	260 (30%)	279 (32%)	268 (31%)
Other	15 (2%)	47 (5%)	144 (17%)	657 (76%)

4. In general, how easy or hard is it for you to obtain textbooks in a convenient and timely manner?

Very Easy	103	(12%)
Easy	396	(46%)
Neutral	248	(29%)
Hard	100	(12%)
Very Hard	14	(2%)
Not Applicable	2	(<1%)

5. When buying *textbooks* from the *COOP*, how big are the following problems:

Large Problem	Medium Problem	Small Problem	No Problem	Not Applicable
Uncertainty in whether textbooks are in stock, necessitating multiple trips to the COOP				
141 (16%)	337 (39%)	264 (31%)	91 (11%)	30 (3%)
Delay in obtaining textbooks in a timely manner (before needed for assignments)				
87 (10%)	220 (25%)	274 (32%)	241 (28%)	41 (5%)

6. When buying *CoursePacks* (also known as sourcebooks), how big are the following problems:

Large Problem	Medium Problem	Small Problem	No Problem	Not Applicable
Uncertainty in whether CoursePacks are in stock, necessitating multiple trips to HPPS				
314 (36%)	269 (31%)	146 (17%)	87 (10%)	47 (5%)
Delay in obtaining CoursePacks in a timely manner (before needed for assignments)				
213 (25%)	258 (30%)	194 (22%)	153 (18%)	45 (5%)

[A comparison of how students felt about the issues of multiple trips and delay between the COOP (textbooks) and HPPS (CoursePacks):]

	Feel that the problem at HPPS is... (compared to COOP)		
	More	Same	Less
Trips	375 (43%)	246 (29%)	163 (19%)
Delay	380 (44%)	264 (31%)	140 (16%)

7. (Optional) Please provide comments about the process of getting textbooks and CoursePacks. What works well or poorly?

Free response answers provided in Appendix D.

8. How many courses are you currently enrolled in (for the fall of 2003)?

1	1	(<1%)
2	0	(0%)
3	35	(4%)
4	682	(79%)
5	140	(16%)
6+	1	(<1%)
Not Applicable	4	(<1%)

9. In how many courses did you enter into a lottery for the fall of 2003?

0	687	(80%)
1	124	(14%)
2	26	(3%)
3	8	(1%)
4+	1	(<1%)
Not Applicable	17	(2%)

10. Out of the courses you entered into lotteries for, how many courses were you lotteried out of and thus unable to take in the fall of 2003?

0	115	(13%)
1	33	(4%)
2	6	(1%)
3	3	(<1%)
4+	0	(0%)
Not Applicable	706	(82%)

(Not applicable includes people who chose 0 for the previous question, #9.)

11. Of the courses you are enrolled in for the fall of 2003, how many changed their meeting time after the first class was taught?

0	750	(87%)
1	93	(11%)
2	12	(1%)
3	0	(0%)
4+	0	(0%)
Not Applicable	8	(1%)

12. Of the courses you are enrolled in for the fall of 2003, how many changed their classroom after the first class was taught?

0	373	(43%)
1	360	(42%)
2	115	(13%)
3	8	(1%)
4+	2	(<1%)
Not Applicable	5	(1%)

Advising

Definition: Your *academic advisor* is the person that your concentration designates as the source for academic advising. This may be a faculty advisor, a head tutor, a rotating staff advisor, or another faculty or staff member, depending on your concentration. For freshmen, the academic advisor is your proctor or other assigned advisor.

13. How many times per semester do you meet with your academic advisor *during* shopping period for the purpose of academic advising?

0	166	(19%)
1	489	(57%)
2	175	(20%)
3	21	(2%)
4+	8	(1%)
Not Applicable	4	(<1%)

14. How many times per semester do you meet with your academic advisor *outside of* shopping period for the purpose of academic advising?

0	408	(47%)
1	250	(29%)
2	101	(12%)
3	39	(5%)
4+	57	(7%)
Not Applicable	8	(1%)

15. How easy or hard is it for you to contact your academic advisor *during* shopping period?

Very Easy	236	(27%)
Easy	300	(35%)
Neutral	204	(24%)
Hard	66	(8%)
Very Hard	15	(2%)
Not Applicable	42	(5%)

16. How easy or hard is it for you to contact your academic advisor outside of shopping period?

Very Easy	268	(31%)
Easy	260	(30%)
Neutral	190	(22%)
Hard	43	(5%)
Very Hard	19	(2%)
Not applicable	83	(10%)

17. (Optional) Please provide comments about academic advising. What works well or poorly?

Free response answers provided in Appendix D.

C.2 Graduate Student Survey

A total of 450 responses were received from a student body of approximately 3,400, for a sample size of 13.2%.

1. In what year of graduate school are you this school year (2003–04)?

2	100	(22%)
3	111	(25%)
4	91	(20%)
5	67	(15%)
6	38	(8%)
7	24	(5%)
8	8	(2%)
9	6	(1%)
10+	5	(1%)

2. In what school are you studying? For GSAS students, in what degree program are you studying? (If studying in more than one school or degree program, please give the primary one.)

Anthropology	20
Architecture, Landscape, and Urban Planning	1

Astronomy	3
Biological Sciences in Dental Medicine	1
Biological Sciences in Public Health	3
Biology, Medical Sciences	42
Biology, Molecular and Cellular	10
Biology, Organismic and Evolutionary	12
Biophysics	9
Business Economics	3
Celtic Languages and Literatures	1
Chemical Physics	1
Chemistry	25
Comparative Literature	8
Division of Engineering and Applied Sciences	25
Earth and Planetary Sciences	4
East Asian Programs	16
Economics	33
English and American Language and Literature	11
Germanic Languages and Literatures	2
Government	16
Health Policy	7
History	19
History of American Civilization	6
History of Art and Architecture	12
History of Science	5
Information Technology and Management	2
Inner Asian and Altaic Studies	2
Linguistics	2
Mathematics	4
Middle Eastern Studies	3
Music	7
Near Eastern Languages and Civilizations	10
Organizational Behavior	1
Philosophy	11
Physics	12
Political Economy and Government	2
Psychology	23
Public Policy	1
Regional Studies - Russia, Eastern Europe, and Central Asia	1
Religion	11
Romance Languages and Literatures	13
Sanskrit and Indian or Tibetan and Himalayan Studies	1
Slavic Languages and Literatures	2
Social Policy	7
Sociology	11
Statistics	1
The Classics	3

HBS	1
HDS	9
HMS	11
SPH	1
Other	3

3. Over the course of the entire *last* school year (2002–03), how many *sections* would you have wanted to TF for classes in Harvard College, ideally?

0	199	(44%)
1	76	(17%)
2	69	(15%)
3	23	(5%)
4	54	(12%)
5	16	(4%)
6	11	(2%)
7	1	(<1%)
8	0	(0%)
9	1	(<1%)
10+	0	(0%)

Briefly, some definitions:

- An **offer to TF** means any offer, however informal, received from a professor, department, etc. and directed specifically to you, asking you to TF a class. This may occur simultaneously with being *hired* as a TF, but need not necessarily be so. For example, if a professor asks you to TF his class, but later withdraws that offer (say, because too few students take the class or because he hired other TFs), or if you chose not to take the offer, that would be merely an *offer to TF*.
- Being **hired as a TF** means that you actually served as a TF for a class during the entire semester.

4. In fall '02, how many sections did you desire to TF?

0	276	(61%)
1	69	(15%)
2	81	(18%)
3	20	(4%)
4	3	(1%)
5	1	(0%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

In fall '02, for how many courses did you receive an offer to TF but were not eventually hired to TF?

0	389	(86%)
1	46	(10%)
2	9	(2%)
3	3	(1%)
4	2	(<1%)
5	1	(<1%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

In fall '02, for how many courses were you hired to TF?

0	291	(65%)
1	131	(29%)
2	24	(5%)
3	2	(<1%)
4	0	(0%)
5	0	(0%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

5. In spring '03, how many sections did you desire to TF?

0	265	(59%)
1	79	(18%)
2	78	(17%)
3	24	(5%)
4	4	(1%)
5	0	(0%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

In spring '03, for how many courses did you receive an offer to TF but were not eventually hired to TF?

0	399	(89%)
1	40	(9%)
2	9	(2%)
3	1	(<1%)
4	1	(<1%)
5	0	(0%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

In spring '03, for how many courses were you hired to TF?

0	304	(68%)
1	113	(25%)
2	31	(7%)
3	2	(<1%)
4	0	(0%)
5	0	(0%)
6	0	(0%)
7	0	(0%)
8	0	(0%)
9	0	(0%)
10+	0	(0%)

6. For each of the courses the student received an offer to TF or was hired to TF, we asked what subject area the course was in. This information was used to interpret later answers.
7. For each of the courses where the student was hired as a TF, we asked the following questions:
 - Course number?
 - How did you find out about this TF position?
 - When offered?
 - Number sections taught?
8. For each of the courses where the student was offered a job as a TF but not hired, we asked the following questions:
 - Course number?
 - How did you find out about this TF position?
 - When offered?

- Was the offered position withdrawn or did you just decide not to take it?
- When did you find out / decide that you wouldn't take the position?

Because the previous three questions had different types of responses based on the experiences of each student, not the responses could not be aggregated directly. Where this was not possible, we present interesting points that could be drawn from the data:

Broken down by course area, the number of TFs hired and the number of positions offered but not hired. Again, these numbers represent only responses to this survey, so blanks indicate that no data was gathered.

Course Area	TFs hired	Positions offered but not hired
Afro-American Studies		
Akkadian		
American Civilization		
Ancient Near East	2	2
Anthropology	8	5
Applied Mathematics		2
Applied Physics		
Arabic	2	
Aramaic		
Armenian		
Astronomy		
BBS		1
BCMP	2	2
Biochemical Sciences	2	2
Biological Sciences	17	32
Biology	3	3
Biophysics		
BPH		
Business Studies	1	1
Catalan		
Cell Biology		
Celtic		
Chemistry	26	5
Chinese	1	
Chinese History		
Chinese Linguistics		
Chinese Literature		
Classical Archaeology		
Classical Hebrew	2	2
Classics		
Comparative Literature	1	

Computer Science	8	2
Currier		
Design		
Dramatic Arts		
Dutch		
Early Iranian Civilizations		
Earth and Planetary Sciences		2
East Asian Buddhist Studies		
East Asian Studies		2
Economics	29	10
Eliot		
Engineering Sciences	4	9
English	26	6
English		
Environmental Science and Public Policy		2
Expository Writing		
Folklore and Mythology		1
Foreign Cultures	7	4
French		
Freshman Seminar		
General Education	1	
Genetics		1
German	2	
Germanic Philology		
Government	12	5
Greek	1	
Health Policy	2	1
Hebrew		
Historical Study A	8	3
Historical Study B	7	1
History	14	4
History and Literature		
History of Art and Architecture	1	2
History of Science	3	1
Immunology		
Indian Studies		
Iranian		
Islamic Civilizations		
Italian	10	
Japanese		
Japanese History		
Japanese Literature		
Jewish Studies		
Korean	1	1
Korean History		

Korean Literature		
Latin	2	
Latin American Studies		
Leverett		
Linguistics		
Literature	2	
Literature and Arts A	7	4
Literature and Arts B	12	1
Literature and Arts C	11	3
Manchu		
Mathematics	2	1
MCB	9	2
MCB		
Medical Sciences	1	2
Medieval Greek		
Medieval Studies		
Microbiology		
Modern Greek		
Modern Hebrew	2	
Mongolian		
Moral Reasoning	3	3
Music	4	1
Near Eastern Civilizations		
Nepali		
Neurobiology		
Pali		
Pathology		
Persian	2	
Philosophy	2	2
Physics	9	
Portuguese		
Psychology	31	6
Quantitative Reasoning	3	2
Regional Studies — East Asia		
Regional Studies — Russia, East- ern Europe, and Central Asia		
Religion	15	5
Romance Languages		
Romance Studies		
Sanskrit	2	
Scandinavian		
Science A	9	3
Science B	5	
Semitic Philology		
Slavic		
Social Analysis	8	

Social Policy	1	
Social Studies		
Sociology	10	8
South Asian Buddhist Studies		
Spanish	2	
Special Concentrations		
Statistics	5	1
Sumerian		
Swahili		
Swedish		
Thai		
Tibetan		
Turkish	1	
Urdu		
Vietnamese		
Virology		
Visual and Environmental Studies	1	
Winthrop		
Women's Studies	2	1
Yiddish		

How did you find out about this TF position?

	Overall	Hired	Offered, not hired
I searched for it myself	53 (10%)	40 (11%)	13 (8%)
Through a friend	26 (5%)	19 (5%)	7 (4%)
Through my department	212 (40%)	164 (45%)	48 (30%)
Professor Contacted Student	181 (34%)	130 (36%)	51 (32%)
Poster, mass e-mail, advertisement	42 (8%)	9 (2%)	33 (21%)
Other	11 (2%)	4 (1%)	7 (4%)

When was the position offered?

	Overall	Hired	Offered, not hired
3+ mo. before classes began	271 (52%)	211 (58%)	60 (38%)
2 mo. before classes began	77 (15%)	56 (15%)	21 (13%)
1 mo. before classes began	92 (18%)	50 (14%)	42 (26%)
2 wk. before classes began	30 (6%)	12 (3%)	18 (11%)
1 wk. before classes began	17 (3%)	9 (2%)	8 (5%)
1st wk. of class	25 (5%)	17 (5%)	8 (5%)
2nd+ wk. of class	13 (2%)	11 (3%)	2 (1%)

How many sections did you teach? (Only applies to positions hired.)

0	7	(2%)
1	211	(58%)
2	128	(35%)
3	14	(4%)
4	3	(1%)
5	2	(1%)
6+	1	(<1%)

When did you find out / decide that you wouldn't take the position? (Only applies to positions offered and not hired.)

3+ mo. before classes began	38	(24%)
2 mo. before classes began	19	(12%)
1 mo. before classes began	46	(29%)
2 wk. before classes began	17	(11%)
1 wk. before classes began	12	(8%)
1st wk. of class	18	(11%)
2nd+ wk. of class	9	(6%)

Was the offered position withdrawn or did you just decide not to take it? (Only applies to positions offered and not hired.)

Position withdrawn	44	(28%)
Decided not to take it	115	(72%)

9. In your opinion how well does matching grad students who desire to TF with available TF positions currently work?

1 (very poorly)	45	(10%)
2	89	(20%)
3	147	(33%)
4	126	(28%)
5 (very well)	43	(10%)

10. (Optional) What do you think works *well* with the current system for matching grad students with TF positions?

Free response answers provided in Appendix D.

11. (Optional) What do you think works *poorly* with the current system for matching grad students with TF positions?

Free response answers provided in Appendix D.

C.3 Faculty Survey

A total of 29 responses were received from a faculty size of approximately 650, for a sample size of about 4.5%. Since there were so few responses we have included the aggregate data as well as anonymous individual responses.

Shopping Period Please rate the following potential problems as to their degradation of the quality of instruction *during shopping period*, placing an X in the box that most describes your experience:

1. Exact enrollment of class is unknown

Severe	7.5
Some	13.5
Negligible	6
None	1
NA	1

2. Arrival and departure of students during shopping period class meetings

Severe	1
Some	15.5
Negligible	11.5
None	1
NA	0

3. How many undergraduates are you assigned to advise?

Sum = 216 (1 faculty member advised 86)

Average = 7.4 (4.5 without the outlier)

4. How many hours do you spend advising your assigned advisees during shopping week?

Sum = 64.5

Average = 2.2 (1.7 without the outlier)

5. How many hours per week do you spend advising your assigned advisees in times other than shopping week?

Sum = 30.4

Average = 1.0

How important are the following to improving undergraduate academic advising?

6. Meeting with students more frequently

High	7
Medium	13
Low	2
None	1
N/A	6

7. Meeting with students for longer amounts of time

High	2
Medium	10
Low	8
None	3
N/A	6

8. Meeting with students prior to shopping period

High	9
Medium	6
Low	7
None	1
N/A	6

9. Having the students' records at advising sessions

High	10
Medium	3
Low	9
None	1
N/A	6

10. Advisors knowing the rationale for concentration requirements

High	16
Medium	5
Low	2
None	0
N/A	6

Please select the magnitude of improvement needed for the following:

11. Undergraduate academic advising at Harvard

Large	8
Medium	7
Small	3
None	1
N/A	10

12. Undergraduate academic advising in your department

Large	5
Medium	6
Small	9
None	1
N/A	13

13. Please provide comments about undergraduate academic advising associated with shopping period and study card signing

Free response answers provided in Appendix D.

TF Hiring and Classrooms *Definitions:*

An “expected lottery” is one that is used to keep the course within an enrollment cap listed in the *Courses of Instruction*.

An “unexpected lottery” is one that is not carried out in service of an enrollment cap listed in the *Courses of Instruction*.

A TF is “hired late” when hired no earlier than the week before the start of the semester.

For the following chart, please list the courses that you taught last semester and are teaching this semester in the leftmost column. For each lettered column, please answer the question that corresponds to the letter. Some questions require you to mark an X in the box and others require a numerical answer.

- A. Did you hold an expected lottery?
- B. Did you hold an unexpected lottery due to lack of teaching staff?
- C. Did you hold an unexpected lottery due to classroom size?
- D. Did you hold an unexpected lottery because you couldn’t move to a new room, as the room you taught in had specific audiovisual or other equipment that you needed for the class?
- E. Did you have to switch classrooms at the start of the semester because of space constraints?
- F. Approximately how many TFs were hired late?
- G. Approximately how many TFs were hired in total?

For example: Professor Shieber is teaching Computer Science 96 this semester. This course had a lottery based on enrollment cap listed in the *Courses of Instruction*. One of the two TFs was hired late. Professor Shieber’s chart would be:

	A	B	C	D	E	F	G
Fall 2003							
Computer Science 96	X					1	2
	A	B	C	D	E	F	G
Totals	3	1	0	0	10	27	146

Please rate the following potential problems as to their magnitude (not their inherent difficulty), placing an X in the box that most describes your experience:

Problem Size:	Large	Medium	Small	None	N/A
13. Your TF hiring process	5	10.5	7.5	5	1
14. Your TF late hiring process	13	6	4	4	2
15. Training TFs	4	9	8	6	2
16. Training TFs who are hired late	10	3	7	5	4
17. Hiring TFs that match your needs well	7	7.5	10.5	3	3
18. Hiring TFs late that match your needs well	14	3	5	3	4
19. Recruiting graduate students from your department to TF your classes	6	6	9	6	2
20. Recruiting graduate students late from your department to TF your classes	12	3	5	4	5
21. Departmental administrative overhead in terms of time involved in hiring TFs	3	2	12	5	7
22. Departmental administrative overhead in terms of time involved in hiring TFs late	4	4	8	5	8

Please see Tables 1–4 for individual faculty responses. In the tables the order of the questions matches that found above. The ID number is a random number assigned to each faculty member surveyed. In Tables 3–4, the entries for questions A through E are yes/no values encoded as “n” for “no” and “Y” for “yes”.

ID	1	2	3	4	5	6	7	8	9	10	11
1	2.0	1.0	0.0	0.0	0.0	2.0	0.0	2.0	3.0	3.0	1.0
2	2.0	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	2.0	2.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	2.0	2.0	5.0	0.5	0.5	3.0	2.0	1.0	1.0	3.0	3.0
5	3.0	1.0	6.0	2.0	0.0	2.0	1.0	2.0	1.0	2.0	2.0
6	2.0	2.0	3.0	6.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
7	2.0	2.0	3.0	2.5	0.5	3.0	1.0	3.0	2.0	2.0	3.0
8	1.0	1.0	8.0	2.0	8.0	2.0	3.0	3.0	1.0	1.0	2.0
9	3.0	2.0	12.0	4.0	5.0	3.0	1.0	2.0	3.0	3.0	N/A
10	2.0	2.0	8.0	5.0	0.5	2.0	2.0	3.0	2.0	3.0	2.0
11	1.0	2.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A
12	2.0	1.0	0.0	0.0	0.0	2.0	2.0	3.0	1.0	3.0	N/A
13	N/A	2.0	2.0	1.5	0.2	3.0	2.0	3.0	3.0	3.0	N/A
14	3.0	3.0	0.0	0.0	0.0	2.0	1.0	3.0	3.0	2.0	3.0
15	3.0	2.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	3.0	3.0	0.0	0.0	0.0	2.0	3.0	1.0	1.0	3.0	3.0
17	2.0	2.0	0.0	0.0	0.0	3.0	2.0	3.0	3.0	2.0	3.0
18	2.0	1.0	7.0	5.0	0.2	2.0	2.0	2.0	3.0	3.0	2.0
19	3.0	1.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	2.5	2.0	6.0	3.5	1.0	2.0	1.0	1.0	3.0	3.0	1.0
21	2.0	2.0	0.0	0.0	0.0	2.0	0.0	3.0	3.0	2.0	2.0
22	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
23	1.0	1.5	0.0	0.5	0.0	2.0	1.0	1.0	1.0	3.0	3.0
24	1.0	1.0	86.0	14.0	4.0	3.0	2.0	1.0	1.0	3.0	3.0
25	1.0	1.0	8.0	0.0	6.0	1.0	2.0	2.0	3.0	3.0	N/A
26	2.0	2.0	35.0	13.0	2.5	2.0	2.0	3.0	3.0	3.0	2.0
27	2.0	2.0	25.0	2.0	1.0	3.0	2.0	2.0	2.0	3.0	3.0
28	3.0	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	3.0	2.0
29	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A

Table 1: Faculty survey responses for questions 1-11

ID	12	13	14	15	16	17	18	19	20	21	22
1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	N/A	1.5	3.0	1.0	3.0	1.5	3.0	2.0	3.0	N/A	N/A
3	N/A	1.0	1.0	2.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
4	3.0	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	3.0	3.0
5	2.0	3.0	3.0	3.0	3.0	2.0	3.0	1.0	3.0	3.0	3.0
6	0.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
7	1.0	0.0	3.0	1.0	3.0	1.0	2.0	0.0	2.0	N/A	N/A
8	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	2.0	3.0	3.0	2.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0
10	2.0	0.0	0.0	0.0	0.0	1.0	N/A	1.0	N/A	0.0	N/A
11	N/A	2.0	3.0	0.0	1.0	3.0	4.0	2.0	3.0	1.0	2.0
12	3.0	1.0	3.0	N/A	N/A	1.0	3.0	0.0	3.0	1.0	3.0
13	N/A	1.0	1.0	1.0	1.0	1.0	1.0	3.0	3.0	0.0	0.0
14	2.0	1.0	2.0	0.0	1.0	1.0	3.0	1.0	2.0	1.0	1.0
15	N/A	0.0	0.0	0.0	0.0	3.0	N/A	0.0	N/A	0.0	0.0
16	4.0	3.0	3.0	3.0	3.0	4.0	3.0	N/A	N/A	N/A	N/A
17	3.0	2.0	3.0	2.0	3.0	2.0	3.0	3.0	3.0	1.0	1.0
18	3.0	3.0	3.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0	2.0
19	N/A	2.0	2.0	2.0	3.0	1.0	2.0	1.0	1.0	1.0	1.0
20	1.0	2.0	N/A	2.0	N/A	3.0	N/A	3.0	N/A	N/A	N/A
21	1.0	2.0	2.0	1.0	1.0	2.0	2.0	3.0	3.0	0.0	0.0
22	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
23	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	1.0	1.0	2.0	2.0	2.0	1.0	1.0	1.0	0.0	N/A	N/A
25	1.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	N/A	N/A
26	1.0	2.0	3.0	1.0	N/A	2.0	3.0	2.0	1.0	1.0	1.0
27	3.0	3.0	2.0	2.0	3.0	2.0	3.0	1.0	3.0	1.0	2.0
28	1.0	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0	1.0	1.0
29	N/A	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Table 2: Faculty survey responses for questions 12-22

ID	A	B	C	D	E	F	G
1	n	n	n	n	n	0	2
1	n	n	n	n	n	0	2
2	n	n	n	n	n	0	3
3	n	n	n	n	n	1	1
3	n	n	n	n	n	0	8
4	n	n	n	n	n	0	3
5	n	n	n	n	Y	1	1
5	n	n	n	n	n	1	5
6	Y	n	n	n	n	1	2
7	n	n	n	n	Y	1	5
7	n	n	n	n	Y	1	3
8	n	n	n	n	n	1	1
8	n	n	n	n	n	1	1
8	n	n	n	n	n	1	1
9	n	n	n	n	Y	1	4
9	n	n	n	n	n	0	0
9	n	n	n	n	n	0	3
9	n	n	n	n	n	0	0
10	n	n	n	n	n	0	1
10	n	n	n	n	n	0	1
11	n	n	n	n	n	1	1
11	n	n	n	n	n	3	4
12	n	n	n	n	n	0	1
12	n	n	n	n	Y	0	3
12	Y	n	n	n	n	n	0
13	n	n	n	n	n	0	1
13	n	n	n	n	n	1	1
14	n	n	n	n	n	0	2
14	n	n	n	n	n	0	1
15	n	n	n	n	n	0	1
15	n	n	n	n	Y	0	3
16	n	n	n	n	n	0	1
16	n	n	n	n	n	0	1
17	n	n	n	n	n	0	4
17	n	n	n	n	n	0	4
17	n	n	n	n	n	2	20
17	n	n	n	n	n	0	0
18	n	n	n	n	Y	0	2
18	n	n	n	n	Y	1	3

Table 3: Faculty survey responses for questions A-G

ID	A	B	C	D	E	F	G
19	n	n	n	n	n	0	0
19	n	Y	n	n	n	1	2
20	n	n	n	n	n	0	2
21	n	n	n	n	n	2	6
21	n	n	n	n	n	0	3
21	n	n	n	n	n	1	2
21	n	n	n	n	n	0	0
22	n	n	n	n	n	0	4
23	Y	n	n	n	n	1	2
24	n	n	n	n	n	0	3
25	n	n	n	n	n	0	1
25	n	n	n	n	n	0	0
25	n	n	n	n	n	0	0
25	n	n	n	n	n	0	0
26	n	n	n	n	Y	2	6
26	n	n	n	n	n	0	0
27	n	n	n	n	n	0	0
27	n	n	n	n	n	0	0
27	n	n	n	n	n	1	5
28	n	n	n	n	n	0	0
28	n	n	n	n	n	1	4
28	n	n	n	n	n	0	0
28	n	n	n	n	n	0	0
29	n	n	n	n	n	0	3
29	n	n	n	n	Y	0	3
Totals	3	1	0	0	10	27	146

Table 4: Faculty survey responses for questions A-G (continued)

D Survey Free Responses

These are the answers students provided to the free-response questions on the surveys we administered. Answers are provided verbatim, with no corrections of any kind. The symbol “¶” indicates a paragraph break in the original. Concentrations, degree programs, or schools are provided where they may be relevant to understanding the response.

D.1 College Student Survey

Question 7. (Optional) Please provide comments about the process of getting textbooks and CoursePacks. What works well or poorly?
(339 responses)

teachers should maybe take preliminary surveys of class attendance, to get an idea of how many students will need books and coursepacks, and give that number to the appropriate sources.

The lines for course packs are too long, and they seem to run out of the most popular books very quickly. It is annoying to have to make multiple trips to obtain a single coursepack.

Coursepacks should be put online like other schools! It would save a lot of money in printing costs and be more available for the students.

the lines at hpps SUCK and make getting coursepacks very difficult. the coop is overpriced, and so i order books online (average 50% savings over coop price) but then it takes 3-4 weeks for the books to arrive so i rarely have textbooks during the first month of the term.

It would be helpful to have an online database to see if the books/coursepacks were available.

The coursepacks at Gnomon are considerably cheaper than at HPPS and if they are out of stock, Gnomon seems to make a new batch a lot faster than HPPS.

Getting coursepacks is quite difficult and a problem! Not only are they extremely expensive, but also the lines are ALWAYS very long and they always seem out. The system there seems quite bad and oftentimes their credit card machine isn't working.

HPPS is run by the most apathetic, ignorant morons on the face of the planet. I encourage all my professors to consider doing their coursepacks at Gnomon Copy, where the staff displays a basic level of competency. The Coop is overpriced and the lines are far too long.

The Coursepacks in general are TOO EXPENSIVE!! I spent \$250 on a single coursepack just for one class. That's definitely the most prohibitive aspect of obtaining coursepacks.

Pre-registration would help with coursepack stocks.

HPPS website information about availability of coursepacks is helpful.

The expenses are the only real problem. The books are so damned expensive...

There should be an online system for determining whether or not books are in stock. Also, for the first two weeks of class, you should have to be enrolled in the class to buy the book.

I feel it's pretty uncomplicated and easy, just too expensive.

In terms of coursepacks - it's a bit irritating that you can only buy the bulk of them in the Science Center! There should be multiple locations--lines would move much faster.

The COOP and the Science Center are both poorly stocked and obscenely expensive.

Coursepack lines are long.

The buy-back system at the Coop is terrible- if you drop a class or switch, it's sometimes very difficult to re-sell the brand-new books you had just bought.

Aside from the extreme expense of coursepacks and textbooks through the coop/hpps, it's very frustrating to wait in line for up to an hour at HPPS, often more than once. If I had more time, I would probably buy more books online and less at the coop.

The biggest problem I have is instructors who don't list their book with the COOP. I'd rather not buy online, but if instructors don't list the book with the COOP, I have to get it online. It's just annoying.

Textbooks and CoursePacks are often really overpriced

The textbook process works excellently. Textbooks are on time at the Coop, widely available, always in stock, but are too expensive. Coursepacks are also easily available at HPPS and library reserves, although there are long waits at HPPS, and the coursepacks are sometimes very expensive.

It sucks when the COOP is the only one carrying the textbook because they don't stock enough books and ask exorbitant prices.

Getting textbooks from online sources works well if you are pretty sure about what classes you are going to take. ¶ You should go early to get coursepacks because the lines can be very long.

Harvard printing services need to print as many coursepacks as expected enrollment

The lines at the copy center are extremely long; perhaps pre-ordering would be a good system...

The system for coursepacks is HORRENDOUS. I do not know why the lines move so painfully slowly, but it has been one of the more painful experiences of my existence. Perhaps they need more workers, but reaching that window is a several hour commitment. Also, a simple sign OUTSIDE listing what is not in stock wouldn't hurt.

it's too long of a line, it's stressful, books may or may not be in stock, and the hours are too restricted in which they can be obtained.

There should be more locations / cash registers for coursepack pick up. The line is always too long.

HPPS is EXTREMELY UNHELPFUL. Prices are way too high, they consistently don't have my course packs in stock, their website will say that the course pack is in - but then they don't have it - and They Aren't Friendly because EVERYONE is mad at them

why are they so expensive? the cost often makes me put off getting them.

Online website saying if stuff is in stock, and the price of item is very good. The lines are ridiculously bad.

Too long of lines while getting coursepacks. Maybe having more windows open to get them?

waaaaaay too expensive!!!!!!

online is cheaper but takes a long time because of shipping time, etc.
¶ the problem with getting coursepacks is the ridiculous line in the basement of the science center

When purchasing coursepacks, it is difficult to tell when certain coursepacks are out of stock. The system is usually pretty speedy when they have them, so there is some ease to the transaction.

long lines b/c only one place to buy course packs, and shopping period (which is wonderful!!!!) means that i don't know if i am going to take a class, but you have to buy the coursepack immediately, which sucks.

Well: centralized system ¶ Poorly: Long lines, often out of stock - which would be OK if there was a way to know easily what was in/out of stock. The problem would be minimized if there were an online site listing out of stock sourcebooks.

Given the frequency with which Coursepacks are out of stock, it's annoying to have to go all the way to the Science Center to find out that you're out of luck.

Coop's prices far too high

Textbooks - if you know what classes your gonna take, getting to the COOP early and getting books used is the best way to go ¶

Coursepacks - just have to get lucky, haven't figured out a method yet

The biggest problem is undoubtedly the pricing of the coursepacks. I would be much more willing to put up with them if they weren't so damn costly. I also use gnomon copy to get coursepacks a lot

Waiting in line for up to an hour to get a coursepack, only to find out that it has become out of stock during the time that you were waiting, is a horrible system. As far as I can tell, nothing works well for the coursepack system, except that it's in a fairly central location.

Libraries should have more copies

they are too freakin expensive

The line system for obtaining sourcepacks works poorly. Gnomon's Copy is always really good about having them in stock. Textbooks at the coop is usually ok (though of course quite expensive!)

It would be great if professors would post the needed books online before classes started.

The lines to buy items at HPPS and the Coop are always outrageously long and at least an hour has to be set aside for buying books or coursepacks if you go through these vendors.

The library system works well for hard to find translations that one would otherwise have to special order from Schoenoffs or the Coop.

Getting coursepacks from HPPS is a nightmare - the lines are usually really long, and they frequently run out. At least you can check online to see if they are in stock though, which is helpful, but I'm not sure how up-to-date it is. The COOP doesn't tend to be quite as bad, but they do run out quite frequently, and are often unsure of when more books will arrive (though they'll usually notify you personally when your book arrives I think).

The availability of textbooks should be accessible online.

Obtaining coursepacks when they are sold in the science center usually involves extremely long lines that sometimes end up with HPPS closing before you actually even reach the front of the line. Also, when a coursepack hasn't arrived yet, the answer that is often given is

Coursebooks at Gnomon Copy are the easiest to do, easy and on time. Science Center is longer and less certain, sometimes packs aren't in stock.

HPPS never updates their website frequently enough about whether sourcebooks are in stock or not, which would prevent useless trips.

i don't buy coursepacks anymore as i feel they are most often a waste of money.

I wouldn't mind standing in line at the COOP or having to go back one or two times if it meant I was getting the best value – but I can usually find the books online for sometimes 50% of the cost at the COOP! (THAT'S RIDICULOUS!!) Coursepacks are the same – they are ridiculously expensive, so waiting in line, and having them always be out of stock is a pain in the butt, when you know you're getting ripped off too.

I've found it works quite well. Thank you.

Coursepacks are crappy...they are very poor about the correct number to have which I can understand because of shopping period. Professors should stop using it though.

The line to sign the paperwork is very slow and extremely inefficient.

Coursepacks should be pre-ordered and it would be very convenient if they could be delivered to each person's mailbox. Either that, or there should be a guarantee that the coursepacks will be readily available.

It's a couple of hectic days, but nothing unreasonable. By the second week of classes, once shopping is done and things have calmed down, it's perfectly fine.

The COOP is too expensive!

The line for CoursePacks is too long.

Coop overcharges. ¶ Coursepacks take forever to get.

Lines are far too long at the COOP and at the Science Center CoursePack distribution site. Moreover, prices are extremely high. As a result, I bought most of my books used from online sources this year, which reduced the price but extended the period of time I spent waiting for the books to arrive. The entire experience is frustrating, especially when you're not certain your course choices are finalized and thus do not want to spend money on books yet.

The coop is very crowded and it's owned by barnes and noble which offends me.

Online inventory would be very helpful, which seems especially applicable for coursepacks. However, given how quickly things sell out and how often they update their stock, this seems unlikely. ¶ If the coop could somehow get syllabi from professors (one syllabus per course) that could also be EXTREMELY helpful in deciding which books to buy when and which books are worth buying and which would be better to just check out from the library.

HPPS does a poor job of providing coursepacks, and their customer

service does little to help the problem. I say we fire all of them and replace them with people who actually want to work.

It is hard to order textbooks online during shopping period for lot-teried classes because you can't return them and it's unclear whether you'll get into the class.

I suppose it's slightly off-topic, but the greatest difficulty I've had with respect to getting textbooks is that it usually takes me the entirety of shopping week to figure out which classes I will be taking. So, I usually wait to buy textbooks and sourcepacks for 1 or 2 of my classes (the ones I'm least sure of) until the end of shopping period, but many professors assume we should have purchased our books earlier and already done reading for the classes. I'm never sure how to deal with this situation, especially because you can't return coursepacks bought at HPPS. It's a neverending conundrum! I suppose it's always possible to go to the library, but I usually never make it there (and the books might already be taken out by someone else if I go there?).

CoursePacks are a major pain requiring students to wait in long lines are to trek all over the place. I sometimes don't even bother buying them.

The coursepack system is terrible. And they have a monopoly! They should be more responsible about producing the books in large enough quantity and on time.

It takes forever to restock core coursepacks when they run out, even after telling the science center coursepack staff and the course staff (TFs) several times that they are out of stock. ¶

It's helpful having textbook returns at The Coop through like the second week of classes since then I can get a textbook if I need it for the first problem set and return it (still in new condition) if I find a better deal online, which is often the case for expensive scientific or mathematical texts. Having the books in The Coop also ¶ helps with deciding which of a couple of classes looks more interesting before a new semester if I have to choose between them in shopping period.

The lines down at HPPS are WAY TOO LONG. Certainly they could do something to streamline the process! I mean, the Coop handles just as many students, but it's much much bigger than the little counter at HPPS. Maybe they could sell the coursepacks at the Coop?

Buying online or buying used (NOT from the COOP) is about the only solution I have, but the trade-off is waiting for all of the books to get in (which may take up to 1.5 weeks, by which point I'm kind of behind on homework).

Books are just too overpriced at the Coop and most of what is on reading lists aren't necessary. I don't buy books anymore because I don't actually have to read them for my classes, and the books I do buy I buy online.

CoursePacks - The distribution could be made much more efficient (so that lines wouldn't be hours long), if the location was changed. Maybe taking over Loker Commons or another large central area and have multiple (ie many more than the two currently there) checking students out would greatly decrease the long lines. Also, an better method for letting students know which coursepacks are out-of-stock would be nice.

Textbooks are easy to get quickly because of the Coop, but are expensive. I usually buy from the Coop and then return if I can find a better deal online or from students. Coursepacks are a huge pain in the butt. Every semester I fall behind because I can't get them before the reading starts. They don't have a good system at all for ordering enough copies and keeping track of what they have.

Something should be done about the efficiency of getting course packs!! At Yale, you order them online, and then pick them up at one of about three different locations. There's minimal wait. Much better than the archaic set-up down in the Science Center.

I think the big problem with textbooks (I don't have much experience with coursepacks so haven't had too many problems) is that if you buy online you can save a lot, but you might not get your books before you need them. And since they run out of used books so quickly at the coop, I often feel pressured to just buy those so that I save a little, and know for sure that I'll have my books when I need them. Also, sometimes it isn't too obvious how much of a book you will need to read (or optional books aren't always listed as optional on syllabi) so you end up buying stuff that you didn't even touch!

I feel that it works very well but VERY EXPENSIVE.

the line at the science center gets really long sometimes. not sure how that could be fixed really.

I think it's ridiculous that the Coop charges very high prices yet still manages to run out of stock. I think if they are going to subject students to inflated prices, they at least need to guarantee books will be in stock. It seems that professors and the Coop don't always coordinate as well as they should; communication is the answer, not preregistration.

The COOP gouges you for coursepacks. SO I try to avoid classes that use the COOP for everything. However, HPPS is certainly imperfect as well. It always involves a few trips to get all the packs.

The lag in updating coursepack availability lists; also the long queues and limited number of lists.

There should be some way you can check online to find out if/when texts and coursepacks are available.

Too expensive and often too little time between syllabus being handed out and reading assignments due...this results in an inability to find competitive prices outside the COOP...

The textbooks are pretty expensive, so making sure i am solvent at the start of the second semester is important.

it's expensive to buy them through harvard, but it's reliable

Getting coursepacks is always a pain. If there was a way that we could preorder them and then pick them up, instead of going in person to wait in the hour-long lines, it would be a lot more efficient.

Books are way too expensive, especially considering the hassle it takes to get them.

Coursepacks always run out and often take too long when they are backordered. There should be a better system for notifying people of what is in stock, I've waited in really long lines only to find out when I get to the counter that they sold out half an hour earlier, very frustrating...

Gnomon works best for me I feel.

having them on reserve in lamont is great. HPPS does a really really bad job of stocking the right number of coursepacks, and the lines are always ridiculously long. ¶ getting textbooks is really really easy.

Poor: long wait in line coupled with multiple trips wastes a lot of time, oftentimes the Science Center basement is short on books so they're not available even when assignments are due (plus the reading builds up so you have to do a lot of catchup work at the very beginning) - this usually isn't a problem if the instructor does coursepacks through Gnomon (which is pretty good about having things in stock), coursepacks are not refundable which poses a problem if you're not sure about what you're taking at the beginning of the semester

I find that the COOP charges ludicrous prices, and it's often much better to find textbooks online through bn.com or amazon. Also, the Coursepack system is absolutely terrible. There's no reason to wait in an hour-long line when orders could be placed online or something like that. It really is a poor system.

Coursepacks are ALWAYS out of stock. I'd like a way to be able to preorder them, rather than being told to come back later.

Coursepacks - there should be a way to order them online and then

just pick them up at HPPS, it would be much quicker. ¶

Coop - it takes FAR too long to restock a book if they run out

Long lines, many are out of stock. Can't get them in time for class work. Expensive too.

Ordering online is often cheaper, but more time-consuming and can (rarely) be unreliable. Takes longer to get the books. The Coop often doesn't have the books I need used, especially if I have to wait and shop around before buying. The best way to get coursepacks is to share the cost with others, or to get them on reserve, since the cost is so high.

There should be multiple distribution centers for different departments to ease the long lines at the science center.

The online HPPS system to check whether Coursepacks are in is very helpful. Could the COOP set up a similar system?

Works reasonably well, be nice if coop offered availability online like coursepack people

Not much. They're just very expensive.

Coursepacks are RIDICULOUSLY expensive and should be kept better-stocked. It also takes too long to get them.

The line for course packs is always ridiculously long so you need to budget more than an hour which is really difficult to do.

coursepacks—it's great that they have a table where you can see what's available & fill out the form BEFORE getting in line (although of course they can still run out one person before you, after you've been in line for an hour). ¶ it is a pain when the profs/tfs don't put the texts/sourcebooks on reserve in the library for a long time—I've definitely gotten behind in reading because the coursepacks weren't ready, the books weren't on reserve, and the books I ordered online were still being shipped.

For CoursePacks, they should do a better job about making it known that you can check availability online (and make the website more well known), and then they should update this source more often.

none

It's a scam. They should have a much better idea of how many they'll need and make prompt orders to suit the information as soon as they get it. The current system is all for the benefit of the suppliers at the cost of students' time and money.

poorly - stocks, they never have enough its annoying ¶ method of pick up - one stupid long enormous line its incredibly inefficient and prehistoric method to hand out coursepacks ¶

If the instock list were available online, that would be extremely helpful. Also, it seems the line could be better organized.

hpps needs to have more people working to make the line move faster. ¶ also, they should not be allowed a monopoly of the market... more professors should use alternatives like gnomon copy.

I get books very early, so no problem getting them. Problem: price.

They are too expensive!!! Especially the sourcebooks

CoursePacks place is always so crowded and they don't have signs up telling what they have run out of. You end up standing in line for 45 minutes and then they don't have half of the items you wanted.

The failure to allow preordering of CoursePacks significantly raised the difficulty of a class for me. I went to buy one 5 separate times only to find out they were out - some of these visits were only 24 hours apart and they had restocked and sold out again in that time. So, it took me over half of the semester to get a coursepack that had all of the problem sets, labs, and assignments in it. Allow preordering, overprint, or don't use CoursePacks!

I've had to order books from the Coop - but that was only because I thought they were books that I would re-read and therefore should own. If the books were not in stock at the Coop, I've never had difficulty finding them online, in other bookstores, or in a library. I rarely purchase coursepacks because they are often a waste of money and I have never had an experience where they were not readily available on reserve at Lamont.

textbooks at the Coop are too expensive! ¶ I like that I can check the status of coursepacks online, but the lines are so long to get them

Getting textbooks at the Coop is easy... The only problem is the lines to the registers are long. ¶ Getting CoursePacks is a giant pain - the Harvard Printing Service is very unclear about what's in stock when, and they take forever to serve people... So you can wait in a short line for hours to get something because they are so inefficient, and then find out that contrary to what you were told at the front of the line, your Sourcepack is sold out.

COOP should have plenty of books for large classes and should be able to get them faster - if students can get them quickly online, why can't the COOP?

Coursepack lines are too long, and sometimes they sell out in the time it takes to traverse the line. It would be helpful if they had a more prominent display that told which were sold out, and it was updated often.

there are huge horribly long lines at the coursepack place in the science center.

i was told that i couldn't get my coursepack not because it wasn't printed, but because they didn't have enough shelf space! ¶ also, the people selling coursepacks do not work efficiently.

I feel as though reading should not be assigned until the course has been scheduled, and the number of students enrolled is settled. I have had many experiences in which the COOP and ESPECIALLY the Science Center or Gnomes have run out of my required materials, putting me behind in reading. Either that or professors should order insane amounts of books. It's at no cost to the COOP, they return unsold books to the publishers...

The CoursePack distribution needs to be more efficient - long lines are a problem, books aren't in stock before they're needed for assignments, etc.

Why can't we order our sourcebooks online and have them delivered to our house (perhaps the superintendent) who then has a list of everyone that ordered them. Then we go to his office, stand in a much shorter line, and get our books?

customer service at the coop works well to find textbooks that are unavailable under your course listing but are still in stock under another course listing that uses the same book.

it's fine but the coop is expensive

Online vendors are cheaper, and in a sense more convenient, but can often be unreliable in terms of time.

there should be more copies of course texts and sourcepacks on reserve, b/c i hate spending all the money to buy every one of them...

There is always a long wait in line to buy coursepacks which is especially frustrating if they are out of stock. So two problems: the really long line and the lack of a sign that clearly indicates which coursepacks are not in stock.

it's important to get to either the coop or the sc basement either early or late in the day—if you try to go around when the major classes meet, the lines are ridiculous. the coursepack system is pretty frustrating. i imagine that space limitations keep them from doing this, but it would be easier if people could just find the coursepacks they need, and then pay for them, like in an ordinary bookstore. waiting in line for long periods of time while staff members look for other people's books can get old very fast.

Ridiculous lines outside science center distributors of CoursePacks.

The coursepack line is always too long and the COOP prices are too high.

It would be nice to have more used books available – maybe a system

to get old books from students.

having them call when the book is in ¶

being able to check status online

Textbooks – i've honestly never had much of a problem with this, but Schoenhofs (where i get most of mine) is much better than the Coop.

¶ Coursepacks – that idiotic fucking line!! why can't we just order them online?? we could then get email notifications when they're actually in, thus saving the entire student body multiple trips to the sci ctr. grrrr!! ¶

The coursepack people in the basement of the science center are awful. They are lazy and unorganized.

Popular sourcebooks seem to be always out of stock.

i don't have any huge complaints

always try to buy old coursepacks from your friends before shelling out \$100 for badly photocopied articles that you probably won't read anyway

Time is a big issue, because many books are much cheaper online, but they require extra shipping time.

It is tough sometimes when many students are deciding whether or not to take a class and the books become sold out. And it is very frustrating to stand in line for coursepacks only to find out, upon reaching the front of a very long line, that they are sold out.

Long lines for buying the CoursePacks are annoying.

Sometimes teachers don't know when you are supposed to go to the Science Center or to Gnommon Copy to buy the sourcebook. They ran out of Robinson Crusoe and didn't get it in for a good week, but we were expected to be reading that edition all along, which sucked.

Going the very first day at the instant the printing place at the basement of the Science Center is usually the only way I can ensure I'll get my coursepacks on time.

Coursepacks ought to have an online status page so people can check whether the books are there before coming to HPPS. The lines are excessively long always.

No there's so expensive and it takes sooo much time!

i ordered a book from the coop and basically it turned out that they didn't order it—after going in several times, i finally got the book about a month later. it was a recommended and not a required book, so the stock left very quickly.

The whole process works poorly right now. ¶

COOP is overpriced.

I don't buy course packs from HPPS. They're never in stock, you have to wait in line, they're overpriced, they're shoddily bound, and you're never going to read them again. I either purchase them used from Habitat or read them on reserve. Works great, except I wish I could return reserve materials to my house library or that my house library had coursebooks for the classes I'm taking. (It only has old ones, so there are no coursebooks for classes offered for the first time.) ¶

Textbooks I either own—I'm an English major, so I do tend to own a fair amount of the reading—or check out of the library. Again, for my English classes, it's usually not tough to find copies of the reading in the library. It can be annoying in other classes. I'm taking FC56 this year and a lot of the books were out of print and/or not in the library system. I've also taken some number of CS classes for which the textbooks were—ahem—less than essential, so I just don't get them. (You guys have taken 51 and 121. You know what I mean.) ¶

The rest of my books I buy from Habitat for Humanity or online. I tried using the Crimson Exchange or whatever they're calling it, but there's no incentive for sellers to unlist merchandise once it's been sold. So after contacting a few people and being told the book as gone, I said screw it and went to abebooks, half, and amazon. It's cheaper and only slightly slower and more reliable than depending on flaky Harvard students. If I know that I'm definitely taking a class ahead of time, I'll check out the syllabus online and buy the book online before the term starts, which makes it easy to get it in a timely manner.

the lines for coursepacks are too long. they should have another distribution center or booth set up just temporarily at the most packed times

HPPS is very inconveniently placed.

I buy from the coop, then buy online, then return to the coop, usually. If I'm buying at the harvard bookstore then I just buy there.

I like supporting independent bookstores in the Square! ¶ Schoenhof's prices are quite high, though!

I think the main problem with obtaining both of them is that they are ridiculously expensive. The Coop has a pretty big monopoly on selling books to Harvard students, so it keeps the prices quite high. Buying from an online company is less expensive, but it makes it trickier to get them in time. Trying to get coursepacks from the science center is an awful pain in the neck. They're usually way

too expensive, the lines are horrendous, and it takes many trips to finally get them.

I wish courses would have their reading lists online sooner... they get them to the COOP fairly early, but students don't have access to that information, as far as I know. If I want to shop somewhere other than the COOP, I have to do my own research to figure out what books I might need.

b/c coursepacks are non-returnable, you have to be sure you are taking the class. if you preregister and assume you are going to take class, then it can be bad if you hate the class and desperately want to switch out.

I wish there were a reserve system for coursepacks. I don't like how they just turn you away and tell you to come back some other time. This semester I had to make at least six trips to the science center to get one coursepack that was continually in and out of stock. The coop has an ok system, but sometimes it still takes too long for books out of stock to come in. This year I had to use Amazon to buy most of my books.

Everything is extremely expensive. Way too expensive

coursepacks are either sold out or extremely expensive... the Coop also has such high prices for textbooks yet there are no other really convenient options for lower prices besides going online and hoping for the best in terms of getting the books shipped in time.

I don't buy textbooks or coursepacks if I can help it, so I normally borrow them from the library.

the worst thing about the coursepacks is that the only way to find out if yours is available is to go down there, plus they're so expensive. i don't even buy them anymore. and the coop doesn't keep some textbooks in stock. i needed a book for a class, but i didn't need it until halfway through the semester. when i went to get it, the coop had none, and the time it would have taken to get it was too long.

coursepacks are not returnable—problem

I tend to buy the great majority of my books online (after comparing their prices to the ones at the coop). Checking online to make sure coursepacks are in is definitely useful.

My biggest complaint is when the Coop is out of stock of a book in the first week of class. They ought to have as many books as students in the class. But I suppose a lot of the problem is people who buy all the books for all the classes they want and then return what they don't sign up for... it's annoying, because I do the opposite - wait until I'm positive I'm taking a class (and sure that I NEED the book) before getting it. It's why I got all my Shakespeare books

at the Harvard Book Store, for instance, although that was not so urgent since all those books cost less than 5\$, are available at any library, and also on the internet for free. It's never a huge deal when the book isn't in, since you can get them at the library... but when the only reserve copy is at Lamont (I'm a quadling) and it's out, you're pretty screwed. I think that's the biggest (and only real) problem - reserve books, which are surprisingly unavailable.

The lines are ridiculously long to buy coursepacks at the beginning of each semester and large courses often run out, which makes the actual purchase into somewhat of an ordeal.

CoursePacks are difficult to obtain on time and the line to get them is usually very long. Overall it's a process I dread.

HPPS never prints enough coursepacks and it takes over a week sometimes to get one.

The Harvard CoursePack system where you have to fill out a form and wait on line in the Science Center basement is ridiculous - it's a waste of time and resources. Why can't they just sell coursepacks in the Coop? It's annoying how you can get all your books quickly in one place but the only way to get most coursepacks is through the Sci Ctr basement, where they are slow and inefficient.

We should encourage professors to get copies of the sourcepacks to Lamont so students can use them!

the coop is unbelievably expensive

I definitely buy them used online. Much cheaper. For non-science courses, I get them all from Cambridge Public Library. ¶ I'd like it if Harvard organized a system through which students could buy and sell used books and coursepacks.

Getting coursepacks tends to be very inconvenient. There are often long lines and things run out quickly.

I think the Coop does a good job organizing their selections. With coursepacks it seems that it is the same thing every year. They run out of stock numerous times with each class, somehow I think they could remedy this for some of the obviously popular classes.

Every semester there seems to be at least one important book that you can't manage to get. In order to beat the crowd, people now go and buy books that they won't necessarily need and then return them. So basically it's a race for who can figure out their classes first.

It seems as though every semester I have to make multiple trips to the COOP and to the Science Center because my coursepacks are out of stock.

Generally I shop online and compare prices. Used books at bn.com and uk vendors are cheaper. I only buy at Coop if it's cheaper (which is rare) or not available elsewhere. For coursepacks, if it's Science Center. I go with the

Getting them EARLY - as soon as you know you're definitely taking the course seems to be the only way to get them

-Too expensive. ¶ -Being an

Coop is normally fairly reliable in terms of stock. CoursePacks are often really delayed.

HPPS needs either more staff or more caffeine; they take too long per student to process requests, leading to long lines.

textbooks at coop too expensive, therefore necessitates search online, however, ordering books online often takes a while.

I think the problems have been greatest when professors have neglected to put in any order for the books rather than when previous orders have been insufficient.

Books and coursepacks are overpriced, which makes the search harder, because i have to research cheaper deals. ¶

professors tend to choose different ways to go about ordering the books for their class, so some professors who want to support harvard bookstore will choose that, and those who don't care, will choose the coop. ¶

i tend to rely on the library and photocopying what i need. that's the easiest method for me so far. ¶

the way the books are set up at the coop works well. i think the harvard bookstore could improve or learn from that because it is often busy in there, and we usually have to ask for help in getting books required for classes.

The lines for getting coursepacks are usually pretty long, and they're also seem overpriced

Updating coursepacks. They are so expensive and change every year, making them impossible to sell back.

The coursepack process takes forever. They make you wait in line for hours and hours and then you find out they don't have what you need. The staff is rude, and you are buried in paperwork – how hard is it to stock and distribute less than 500 items?

textbooks aren't too much a hassle. The coop, though, took so long to get one book in this year that I've canceled my order and just check it out from the library when I need it. Coursepacks, however, are not so great. There needs to be a system whereby professors say

whether a year-old CP is usable for the course. Also, the wait times are prohibitive, especially when one has a limited amount of time available in which to purchase them. And some are very expensive as well.

When the Coop does not have a textbook in stock the reason is usually that the publisher is out of stock, and so no stores have it in stock. This is understandable and unavoidable. Come on, classes and instructors are reasonable—if no one can get the textbook no professor would make assignments that depend on it without making other arrangements, such as xeroxing the first chapter, etc. This is not a problem,

Both are far too expensive and badly managed. The Coop could use more space as books are too crowded together. Also there are not enough used books at the Coop. The lines are too long on the first few days - they should know by now that they're going to have thousands of kids coming through. However classifying books by course works well as sometimes the syllabus doesn't even list all the books necessary.

The process is actually pretty straight forward. I just wish there was some way to buy course packs online so that we could just pick them up instead of waiting in line

The coursepack price and unpredictability are huge hassles.

Coursepack website often out of date, so when you go there expecting a sourcebook to be there, it won't. Also, there are HUGE lines every semester for both.

TOO EXPENSIVE! It's why I purchase most of my books online at Barnes and Noble or Amazon, because though they take a little longer, they don't screw me over on the prices like the Coop does.

Most of the time, I go there and they are out of stock. An online list of current stock could be useful

One big problem is that often I am shopping a class and I so I don't want to buy a non-refundable coursepack. However, by the time I've decided to take the course all the eager-beaver students have bought up the packs in stock and I have to wait for a reorder.

They are WAY too expensive!!!!

books at coop are above retail price. sourcebooks are stupid, in that copy centers make tons of money off of them.

The Coursepack order forms should be done online rather than on those rickety tables. Even better, they should let you pay online with a credit card or whatever else they accept. That would eliminate those horribly long, slow, painful lines.

It all costs too much! Put the coursepacks online. Get someone to provide textbooks that isn't going to hike the price....for example the university itself.

Having all textbooks and coursepacks in stock is, in general, a big problem. Coursepacks generally necessitate, on average, at least four trips for me to get all the coursepacks I need each semester. The HPPS online system, unfortunately, has not worked so well because it is not updated in sync with the whiteboard at HPPS, which has the official coursepack inventories; the online system is thus kind of unreliable and not a good indicator of whether a coursepack is in or not.

line too long!

It's really helpful that HPPS tells the availability of coursepacks online now.

More recent textbooks should be available to check out at Cabot rather than having only the older editions being available for check-out and all the new editions on reserve

no problems with getting them, per se... but i buy used books from online or other students because they're so much cheaper

cost, mostly. I find it extremely disturbing that many of my friends (and myself) choose courses based on the cost of textbooks and sourcebooks...

The main problem with coursepack is their price - so expensive! It is better to get them second-hand.

Long lines are awful. And of course the outrageous prices are horrible. I spend obscene amounts of money on books and coursepacks and I plan on figuring out a better, less expensive way to get my books next semester.

The line for getting coursepacks are too long and slow at peak hours.

I reluctantly buy my textbooks from the COOP - reluctantly because they are so exorbitantly expensive. On the other hand, the organization of the textbook section is very convenient. I have also been frustrated on several occasions by lack of availability at the COOP. I have to confess that I rarely even bother to buy sourcebooks, since some of them are outrageously expensive (my freshman year, I had to pay \$220 for a set of two sourcebooks; the following year, the cost for that class's sourcebooks had gone UP another \$50!) and often less important than textbooks. I discovered a website that cites the availability of sourcebooks downstairs in the Science Center, and that was helpful. A more widely publicized website would probably be appreciated by many students, so we can save ourselves multiple trips. Meanwhile, the Science Center should have more

copies available at once – I don't think I've ever bought a source-book there BEFORE I had an assignment due in class.

Lines far too long in getting CoursePacks.

Obtaining coursepacks and books in a timely manner is difficult because of financial considerations. The COOP is much more expensive than many other methods of buying books—online, or from a used bookstore. Thus I rarely buy from the COOP. But as I can't order books till I'm sure which courses I'm taking, they often don't arrive until several weeks into the course, if I can afford them.

Often when classes are larger than expected, the coop will run out of books, and the coursepacks will also run out.

I always try to go EARLY in the morning before the Coursepack line gets crazy. Best bet is always to get used materials from friends or check who's selling what at Harvard (ie. WISHR book sale, UC marketplace, etc.)

Every time you go to HPS to get a coursepack at the beginning of the semester, they act shocked that there's this sudden surge in demand. Duh. They really should be a lot better in anticipating that surge, by having more people at the desk pushing people through. They also need to have some system of reserving online, so that you don't go in upon the (almost ubiquitous) reprinting, only to find that all those are gone as well.

I wish exchange between students were easier.

COOP textbooks are way too expensive, and they sell out quickly for popular classes. Coursepacks are also obscenely expensive, and they are pretty much incompetent when it comes to whether or not they are in stock—making many trips necessary for no reason.

I found buying even new editions of textbooks much easier and significantly cheaper online. You know they're in stock and they come quickly, usually for no shipping fees if you buy enough.

It's annoying because the Coop offers no discounts on the textbooks. It's only convenience is that it normally has all the books needed, but if better deals are available, I will not purchase my books at the Coop.

For one of my courses, new runs of coursepacks were printed several times, but only a few were printed in each new run - many of us returned several times only to find each time that the latest print run was sold out. I assume this was due to auditing students purchasing the packs. Perhaps HPPS could record unfilled requests to better estimate the number of coursepack to print in supplemental print runs?

Course packs are RIDICULOUSLY, RIDICULOUSLY EXPEN-

SIVE. 250 pages cost me \$85!!!! This is scandalous, and from what i understand, quite a benefit to Harvard University press. The Coop is too expensive too-i never, never use them. Online is so much cheaper.

What works most poorly are the prices

course packs are ridiculously overpriced

There needs to be better communication about the coursebooks available so students can access them, and start preparing for class, as teachers still assign work.

I usually order my textbooks online and early- so there usually isn't much of a problem. Getting coursepacks through the science center is never easy- there are usually delays in the textbooks and they are ridiculously overpriced.

Coursepacks are awfully expensive!

An annoying thing about the COOP is that sometimes they mislabel which books are Required and which are Recommended. Also, it's a tough choice between buying books for classes you may or may not end up taking or waiting until you know for sure but risking that the books will be sold out.

There should be more places to get coursepacks so the line isn't so long. I love classes that have them in gnomen b/c the coursepacks are cheaper & easier to get.

CoursePacks are always more difficult to obtain than textbooks, as there is never a time when the Science Center can quickly serve everyone.

The process ruins what should be a fun week of getting back in the swing of things :(¶ The lines are ridiculous and you'd think that after years of seeing that providers are understaffed, they'd do something to fix it.

The Coop would be better if they would order a few more books per class. The CoursePack people present a larger problem. They have more delays, sketchier availability, and their quotes about when things will be ready are much less reliable.

The wait in line for obtaining coursepacks is unreasonably long, particularly when one can wait in line for an hour and then find out that a coursepack that was supposedly in stock really isn't.

It is odd that the HPPS knows the number of students in the class but still produces far too few coursepacks.

I don't really buy books from the Coop. I figure out what classes I'm going to take and order books over the summer. Most of my classes don't use sourcepacks.

The CoursePacks line is extremely inefficient. Textbooks are generally easy to get but overpriced.

The CoursePack system is terrible. They should really try to decentralize and offer students more vending stations, or they should plan ahead and print a larger amount of coursepacks (because they always run out of everything in a few days).

Some instructors seem to have not been informed about how to get textbooks in at the COOP, and as a result textbooks often become difficult to acquire. Other times, the COOP does not stock the type or number of books that the instructor asks for, also resulting in delays.

Textbooks are not really a problem, Coursepacks are often out of stock for larger classes, but usually there are not assignments during shopping period, so there is leeway in getting it.

It works fine for me. I have no problems.

Books are generally overpriced at the Coop, and are much less costly to order online. I have not had to get any coursepacks in the past year.

I've found that going to buy both textbooks and CoursePacks as early as possible is the best way to ensure getting a copy.

The problem is that I take too long to pick out my classes. By the time I know which books I need, they are usually sold out.

farfarfar too expensive

i dislike that coursepacks are non refundable. Also that some of the texts sold at teh COOP are shrink wrapped. You can't even look through the books because then you can't refund them if you don't like the course or end up not taking it.

I am still waiting for a textbook from the coop that I had to order three times. It was a published sourcebook though so there is no other place to get it and this one was not available on reserve either.

The Coop is convenient for used books. Online vendors are good because they are generally cheaper than the Coop, but it takes longer to get the books.

The Coursepack people are terrible. They get estimates of how many people will be in the course and still print too few coursepacks. They run out much too often.

they are sooo expensive, which is a large deterrent to buying them.

The huge lines for both coursepacks and textbooks are really annoying.

professors assign reading from coursepacks before you know whether

you are definitely going to take the course, and you cannot return coursepacks to hpps, so result is not reading and getting behind or buying unneeded coursepacks

there's a huge amount of line-waiting in both cases, but at least in the case of the Coop, you're waiting, KNOWING you're going to get what you need b/c you're already holding it. There's nothing worse than making a trip to the SC basement for naught.

They are too expensive!

The prices on Coursepacks are prohibitive — which sends many students to the library seeking to check out the same Coursepack when an assignment is due.

sometimes *all* of the coursepack/supplementary material is available for download on the class website (as in chem 5), and yet the creator of the coursepack, who stands to profit from selling many copies, tells everyone to go out and buy a hard copy for \$16. This enraged me and many of my classmates.

textbooks are easy to obtain, but sometimes a little expensive if bought from the coop. coursepacks are both expensive, and difficult to obtain whether it be because they are not in stock or just because there are long lines which can delay you for a substantial period of time.

Coursepacks, aside from being really expensive, are also very annoying because you have to make so many visits to see if they have them in stock. Also, the lines are always really really long, and I feel the process could be made faster.

Even small classes should preferably place two copies of CoursePacks on reserve in libraries.

i dont buy books anymore but just take out of library. buy sourcebooks over textbooks. but takes ages to get reorder in the SC once sourcebook sold out

COOP is too expensive, online vendors sometimes cancel orders or send the wrong book, coursepacks are often out of stock for large classes

easy

They're so **** expensive!!!! :(

THE WHOLE SYSTEM IS AWFUL!

Everything is way pricey... it would be awesome to have a more efficient book-swapping/selling system.

I bought all my books on-line, except for one workbook. I saved a lot of money, but had to use textbooks at the library for a week or two

until my books came. I had no problem getting my CoursePacks, but I know several people had problems when the ones they needed were sold out.

There should be an online system whereby students can check to see if their desired book is in so they don't have to run around and waste their time.

It works poorly to try to get a sourcebook because finding out when they are in stock is impossible. They tell you to come at a certain time and you do and the book is not there. It is very frustrating.

The COOP is often very confusing in how they lay out the material for various classes. Sometimes they have the material in stock, but not with the course material.

Books are often overpriced and hard to obtain in used form unless you know which classes you're taking at the very beginning of the semester. CoursePacks are often sold out, unavailable for several days after being sold out, hard to obtain, costly, and have very slow rate of return when asked to print more of them.

Gnomon copy is frequently out of the coursepacks I need. The COOP also sometimes doesn't have a book by the deadline it promises.

i hate that line in the sci center at the HPPS, i barely wanted the sourcepack that badly

for gov 1340 we had to go all the way down to KSG and then sign up and then come back the next day to pick it up. very inconvenient.

I really like to order them online, but in the meantime, I buy them from the Coop and then return them before the deadline. Getting CoursePacks is a big hassle. Maybe an email system or a regularly-updated website would be a practical solution to the problem of getting to the center and then finding out that the book is out of stock.

Seems good to me.

I think coursepacks are ridiculously expensive.

CoursePack system currently works well (except for the prices). Discounted packs should be offered more often than just Habitat for Humanity.

The COOP is so expensive! In the future, I will comparison-shop online, however this creates its own problems - i.e. shipping items so that they arrive in a timely manner.

Too expensive.

There should be a way to check online whether the books that you

need are in stock.

It is best to buy coursepacks and books from other students because you get them cheaper and when you need them. Getting coursepacks from HPS is such a horrible process to go through. Not only are they ridiculously expensive, but also they never have enough in stock.

The CoursePack system is incredibly inefficient. The school knows roughly how many people sign up for a class each year, and so they know roughly how many CoursePacks will be needed, so I didn't understand the HUGE shortage and long, long delay in getting more coursepacks in. They just weren't available before we needed them for assignments. I know this caused a big problem for many people I know. The whole problem is that we basically have to buy the coursepacks from the school (although in some cases they can be bought from other students), so if the school runs out, the students just have to accept that and start off the year behind in reading and assignments. That is not right. ¶

Also, the system of two separate lines for CoursePacks (one for forms and coursepack number info, and the other to actually buy the course packs) just creates more time waiting in line and more congestion and confusion. All of the forms and information could be made available online, that way you could fill everything out (and even pay) online, making the line at the actual distribution center run much more quickly. ¶

¶ As for textbooks, that works pretty well. The problem is that when a course requires both a regular textbook and say, a work book, the Coop sometimes sells the two together. This means that if you can only find one of the two books cheaper online, you still have to buy both of them at high prices from the Coop. If they were sold separately, books could be bought more cheaply overall.

far too expensive. other than that, it works pretty well. as long as you purchase well in advance, then it shouldn't be a problem.

It would be helpful if more course packs in particular were ordered at a time so that they would be less likely to run out

Well, I actually obtained my coursepack from Gnomons copy, they were asses and didn't have it, even though there were only 30 people EXACTLY who would ever, in the history of time, need it.

online booksellers are the best. You should just make sure you buy them from a reliable source and get fast shipping. I saved hundreds this semester buying them this way ¶

Other than beginning of term, Coop textbooks are very scattered and not always under logical categories, true also in the Harvard bookstore. (for example, some works of Marx were filed under eco-

nomics, some under Classics, none under philosophy, works about Marx under history, and

Gnomon's often does not have their course packs in stock when you need them. i've only had to buy books for one term, and I was able to use a variety of sources to get them.

CoursePacks are sometimes unavailable, which was an issue for some of the people i know

textbooks at the Coop are too expensive. And at those prices, their stocks should at least be guaranteed.

could be more timely, less expensive

The problem with CoursePacks is that it seems that they are never in stock when needed at the beginning of class.

Filling out Coursepack forms is a confusing process and the staff generally are not friendly or patient with you about it when there are a lot of people.

coursepacks are easier to obtain, and the location is convenient, but the prices are pretty high; its a lot cheaper and a lot more convenient online

The way textbooks are organized in the COOP is good. The long lines to buy coursepacks are NOT.

course packs sucks because it is way to slow to get them and everyone needs them at the same time. also they have a monopoly cuz they are the only place where we can buy them from, that sucks too

The Coop is horrible because you never know if your books will be there or not. Overall its a horrible system ¶

Get them as soon as the quarter begins

It's too expensive

The lines for both textbooks, but especially coursepacks is ridiculously long for a process which occurs over and over. A better system for buying books is needed. Also traffic control as to blocking entryways and such is a major problem.

The CoursePacks are too expensive. The textbooks as well. They should be cheaper. Perhaps CoursePacks can be provided for with financial aid or they can be given for free to students who don't have the necessary financial resources?

Why is it so expensive? ¶ Wouldn't it be more rational for textbooks to be sold by Harvard, instead of a profit-making business as it the Coop? Why do we have to spend hundreds of dollars on textbooks each semester?

There is no problem with the process. Books I need are always in

stock, but I see no reason why I should pay \$60 or so for coursepacks that will only be used for one class and could easily be made exclusively available online.

The lines are really long, but other than that it worked OK.

coursepacks lines are ridiculously long.

LONG LINES at course pack office

The coursepack distribution system in the science center does not manage crowds very well. There are very long lines at the beginning of the term. If they would start printing coursepacks for upcoming terms sooner, then students could get a head start on purchasing the coursepacks they know they need.

COOP is way overpriced. CoursePacks almost always run out for popular classes.

being unsure of whether the books are in stock; if not, it means you have to make another

The CoursePack/texts are often not available and take a long time before they are in stock again.

I got my coursepack from Gnomon Copy, and therefore didn't have to wait in line. This was very good.

I have not yet needed to get a CoursePack, but I like the way that the Coop sets up the textbooks according to classes.

I have had a lot of success getting source pack from Gnome Copy

I've only gotten a CoursePack from Gnomon Copy, but when I tried to get it there, it was out of stock, so I missed a very important first reading assignment.

There is a crazy rush to get to the Coop before it becomes jam-packed and everything is sold out. The Coop's organization is a bit confusing too. ¶

I had to make 4 trips to HPPS to get my courseback, and that was 1 week after I was supposed to have gotten my coursepack in order to do the reading. The online notification about availability of coursepacks was NEVER updated so I always ended up making useless trips. ¶

Also, the no-return policy can be taken to extremes - I accidentally purchased the wrong coursepack, and WHILE STILL AT THE COUNTER OF HPPS, they would not let me return it! It should not have been too difficult to simply reverse the purchase, when clearly I had not used it because I had not even left the purchase counter yet! Or maybe it is difficult? I don't know.

Ummm...one of my coursepack cost \$240. The COOP marked up

the price by \$70 according to the professor.

It would be nice if CoursePacks were online or if the UC got the textbook exchange thing running well (COOP is too expensive!)

definitely get used books from other students in clubs that you're in by sending emails over the list.

They are way too expensive and the process is too chaotic.

How about an online, updated list of textbooks and their status (as in

Why can't teachers distribute them? The coursepack line is very long and unwieldy and the entire process is buried in paperwork. Textbook distribution is fine :)

There are too many long lines, and the prices are very annoying.

TOO EXPENSIVE. Coursepacks suck because you have to walk all the Way to the Science Center stand in line for an hour waiting to spend \$150 on a packet of papers, and then get to the front of the line and find out that the coursepack just sold out and won't be in until a week from now. Same with the Coop, you walk all the way there, and everything is completely sold it.

The COOP doesn't always have them in stock...and even then, the prices are so high, that its almost worth a week of class to order them online.

Doing more stuff online, like what HPPS is doing for Coursepacks starting Spring 2004, would be quite helpful. And then, of course, there's the inevitable question about how much books cost...

Question 17. (Optional) Please provide comments about academic advising. What works well or poorly? (280 responses)

Setting up meetings in person, either with an assistant or with the advisor, rather than via email, makes it much easier to get an appointment which is good for both parties. (Afro-American Studies)

Af-am has great availability and friendliness of advisors. ¶ Philosophy is stuffy and harder to get in touch with. all of my answers here are with respect to afam, with regards to philosophy i almost never meet with my academic advisor (maybe 2ce during shopping and once more during the semester). WE don't really discuss classes as much as we discuss requirements. (Afro-American Studies)

I am an Afro-Am Concentrator and I have no problems with that advising. I made A LOT of mistakes in my class choices because I did not have a PRE-MED adviser as of September. (Afro-American Studies)

I do not feel academically advised. My house advisor is not even

a graduate student in my field of study, and my concentration has yet to assign me an advisor. The assigning of advisors is merely a front for the lack of advising that takes place here. (Afro-American Studies)

i haven't gotten very much advice yet.... (Anthropology)

Advisors tend to be unfamiliar with the nature of many courses, leaving them unable to provide advice about them. (Anthropology)

anthro advising is generally great, Penny Rew is always around to help out and during shopping period the wing tutors also help out with extra office hours. (Anthropology)

My academic advisor is my thesis advisor, so i see him once a week, it's actually a pretty awesome set up. (Anthropology)

Its been very easy for me to contact my academic advisor b/c he's one of my profs and his assistant is his tf (so 15/16 may be less representative of the population). Also, I have never met w/my advisor to discuss what courses to take (always decided that on my own). (Anthropology)

I have yet to have much to be advised about, although I'm sure I will in the future. (Anthropology)

I usually go to the head tutor of the social anthropology wing or to my thesis advisor for advice, rather than to my designated academic advisor. (Anthropology)

It is very bad. I have seen my advisor once the entire year. (Anthropology)

Academic advising really is something a student needs to take into his or her own hands, because often the advisor will not periodically re-checkup with the student, so the student shouldn't just wait around for someone to ask about his or her status. (Anthropology)

we should be required to meet with the professor more times per semester (Applied Mathematics)

Advising in the applied math department works well. Advising in the physics department does not. (Applied Mathematics)

Not very closely related to my field. Applied Math is not particularly well advised, and the best advice seems to come from faculty members who are not my advisor (or eligible to advise for applied math). (Applied Mathematics)

Sometimes finding times when both you and the advisor is hard, but can usually be reconciled ¶ (Applied Mathematics)

when, as in my case, an academic advisor takes an unexpected leave of absence, don't assign *all* of his/her advisees to the same substi-

tute, since that means it's nearly impossible to meet with the new adviser. (Applied Mathematics)

i don't think i really remember who my academic advisor is. all my advisors have been pretty distant except for my hall tutor. (Astronomy and Astrophysics)

I asked a professor to be my advisor. Because it was my choice, I'm very happy with advising. (Astronomy and Astrophysics)

It could have been helpful if my advisor had had more questions. (Astronomy and Astrophysics)

He is at the med school which is a hike out, but that's ok. My specific advisor is great - a fabulous resource when needed, always emails back in a timely manner. (Biochemical Sciences)

the advising at harvard is nil. not cool. advisors, in my experience, are not concerned with undergrads. bad bad bad. (Biochemical Sciences)

Quality of advising is very much dependent on the advisor. (Biochemical Sciences)

I've been disappointed by academic advising in biochemical sciences...I am not advised by my tutor; we simply have tutorial together. (Biochemical Sciences)

Having regular meetings with my biochem tutor (1 every 2 weeks) made it really easy for me to feel comfortable approaching my advisor. However, my biochem tutor didn't necessarily know more about what class I should take compared to upperclassmen or people who were more familiar with the actual courses available here. (Biochemical Sciences)

some departments are not well organized, advisors are hard to reach, not on campus, and not fully familiar with everything they should be (Biochemical Sciences)

when you don't (Biochemical Sciences)

It's better to have someone who works on campus... (Biochemical Sciences)

It seems silly for one's academic advisor to be affiliated with the med school rather than the college, as often happens. It's a wonderful idea to assign students to tutors who are at the med school, but those students should have an academic advisor at the college so that they can have some idea of what courses and plans of study are appropriate. Many students find that their tutors at HMS, wonderful as they are, are understandably not familiar with the undergraduate curriculum and thus cannot provide adequate guidance in course selection. (Biochemical Sciences)

Having advisers on different campuses or who aren't around very much works very poorly. (Biochemical Sciences)

They are generally useless for help with class choosing, etc. (Biochemical Sciences)

Until several weeks ago, my concentration advisor worked at Mass. General Hospital's Charlestown campus, making it very difficult for me to visit him. As a result, scheduling meeting times at Harvard became quite difficult. But he just moved labs to Harvard, so it's a lot better now. (Biochemical Sciences)

I don't take advantage of academic advising, although I feel like I should. (Biochemical Sciences)

It is nice to have someone who knows the system to bounce ideas off of. However, as a freshman, your advisor is frequently your protor. This means that your protor may actually know nothing about the concentration you are interested in, or at least, nothing that is not available to you through the fields of concentration book and course lists. It would be better if advisors were assigned based more on academic interests. (Biochemical Sciences)

While the whole 'take what you find interesting' bit is nice, it doesn't work for shit when you are thinking about sciences...My advisor is a nice person, but doesn't seem to know what she's talking about outside of the arts. It would be better to have academic advisors completely separate from proctors. (Biochemical Sciences)

Faculty:Student ratio is poor in advising, and faculty has no interest in student except for signing their sheet. (Biology)

Advising works poorly because I don't actually get any advice from my advisor. Maybe there should be a fund for advisors to sponsor more activities and events, like teas, etc for his/her students. (Biology)

I don't really get anything out of meeting with my advisor. So I just go to get my study card signed and ignore him other times. I may meet with him more often as I start looking at higher level classes and a theses. (Biology)

It would be nice if my advisor made the effort to know my name, and actually advise rather than simply sign study cards. (Biology)

He seems nice, but he's not very helpful. Basically, he signs my study card and says (Biology)

My adviser doesn't really seem to care that much. It seems sort of pointless. (Biology)

It often seems like my advisor and I only meet so he can sign my study card. It would be nice if there were more advising in general

about what to do after Harvard (how to find a job in your field or get into grad school). (Biology)

the bio dept. assigns each concentrator one advisor for all three years. every shopping period, the advisors' times available for advising appts are posted on the department website. although the times may be restricted, the advisors are generally very flexible and make an effort to accomodate students' schedules. i've generally decided on my own (or been dictated to by my requirements) which courses to take, so i haven't really had to consult my advisor about courses, just about my study card, but i've found him very accessible in any case. (Biology)

I dont think the advisors really care to advise. I think they will give advice if you find the time to ask them for it, but they definitely don't go out of their way to help students choose classes. (Biology)

Not enough active advising- I never feel like someone is looking out for me. (Biology)

My academic advisor was really just given to me because everyone else who could sign my study card was busy. The undergraduate biology office does not do a good job about helping one find a good and helpful academic advisor. (Biology)

Even though we only meet during study card time, my advisor is always open to talking me outside of that time. He has reasoned suggestions but I feel that in the bio concentration at least, there's not much to advise about. The 16 classes are there you just need to sign up for em ... and pass em :) (Biology)

I have had 3 advisors since Sophomore year. Advisors who are not interested in advising is a serious problem in the Biology department. My advisor does not recognize me each time I see him. (Biology)

I entered (Biology)

they tend to not know us very well (Biology)

Well: Friendly, accessible. ¶ Poorly: Too positive overall. Never willing to say (Chemistry)

For upperclassmen, you never really feel the need to contact your academic advisor, unless you really have a pressing question about courses for your concentration, where you'd probably go to the head tutor of your concentration department. (Chemistry)

Works fine in small concentrations, not in large ones (Chemistry)

It really depends on the department advisor. Chemistry has a terrific advisor in Gregg Tucci. His office is right by the SC elevators and his door is always open. That flexibility in scheduling plus his friendliness and helpfulness make him awesome. (Chemistry)

It seems rather pointless - the only reason I meet with my advisor is to sign my study card. There are enough resources in the houses that I can get advice much more conveniently, from someone who knows me much better. (Chemistry)

Grabbing a meal in the dining hall is usually the only way to contact my advisor — advisors in general just have sooo much of their own stuff going on that advising isn't at the top of their list. (Chemistry)

some academic advisors are much more helpful than others. my academic advisor is very kind but she is not able to help me much in choosing courses. (Chemistry)

Advisors should take their role more seriously, perhaps remember who their advisees are. (Chemistry and Physics)

It was hard freshman year before I had an advisor because the only person I could really talk to about my classes was my freshman proctor, but she was a law school student, and I was interested in physics. (Chemistry and Physics)

Classics dept just got a new DUS who is MUCH better than the last one, who clearly didn't give a crap. people shouldn't be allowed to do the job unless they actually care about it!! also, there should be fewer students per advisor. much as the new DUS is great, he has to administer to far too many students' needs, so it's difficult to get to him during busy times of the year (i.e. the times when we need him most!). (Classics)

My academic adviser does not know me at all. I think there could be a much better relationship with academic advisers, in general, but I am not sure the best way to go about making this work. (Computer Science)

Many professors seem very rushed around the time of advising, only wanting to get the study cards signed as quickly as possible, although I find my professor to be better in regards to that. (Computer Science)

I think academic advising is a really good idea. Its implementation might have some issues. It really doesn't help if there's a professor in your department who is authorized and willing to sign off on your study card without looking at it for more than 10 seconds or talking with you. I'm not really sure how to (Computer Science)

I have had a great experience in my department – my main advisor has been responsive. When he was on sabbatical, my alternate advisor was very responsive. And my thesis advisor has gone above and beyond the call of duty to provide advice and support, even acting as my main academic advisor at times over the past 4 years. (Computer Science)

I don't feel that my academic advisor knows me, or cares to know me. I don't feel comfortable asking for advice from him. I don't feel comfortable approaching him with my academic problems. (Computer Science)

My advisor is new and completely unfamiliar with the way the school works and pretty useless for advising. I do have plenty of other people in the concentration willing to help, it's just that my assigned advisor isn't very good. (Earth and Planetary Sciences)

It became a lot easier since Mather House got an East Asian Studies Tutor who I know fairly well. Before that it was much more difficult. If your tutor is in your house you will probably end up eating dinner with him/her so that you meet more times overall, maybe not for formal advising purposes, but usually you can slip in those kind of questions or voice those concerns. Before the EAS tutor came to Mather my academic advisor was a law student whose name I promptly forgot and I never saw ever again. There are advisors in the EAS department but the building is far away and it's mostly for the purposes of getting study cards signed. (East Asian Studies)

I don't know what the academic advisor's purpose is other than making it harder to get a study card signed. How can you discuss classes with someone who knows nothing about you and has no interest in seeing you do anything other than take classes within your concentration? (Economics)

The economics department has office hours everyday so it is incredibly simple to see an advisor. However, it is impersonal since that advisor is not specifically assigned to you. (Economics)

My house advisor is non-resident, so it makes it fairly difficult to reach him sometimes. Also, my advisor from last year left the house without really announcing it, meaning there was no real transition between advisors. (Economics)

My psychology advisor was NOT knowledgeable about requirements for the concentration, had to check with others, was completely inaccessible and delayed getting back to me - I ended up signing up for a class I didn't need to take because of her. (Economics)

works very poorly (Economics)

poorly, i have to go to the ec10 office if i ever need help since our house doesn't have a residence econ tutor anymore (Economics)

I only go to academic advising to sign my study card. This should probably not be the case however. It would be nice to have an adviser who was a college equivalent of a high school guidance counselor. (Economics)

I think the fact that in this very survey you have to explain to stu-

dents who to consider their academic advisor is indicative of the lack of guidance most Harvard students are faced with. ¶ (Economics)

I don't know who is my academic advisor. (Economics)

It seems relatively irrelevant. I tend to figure it all out for myself, and my advisor becomes someone who basically signs my study card. If I need advice, I can get it from anywhere in the department. (Economics)

Once you have repaire with the advisors, it is very easy to get guidance, but getting through that (Economics)

Poorly for econ...If it were a professor i would try to ask questions and build a relationship but it is a grad student who doesn't know that much. (Economics)

Some economics dept. advisors are hard to reach even by e-mail and thus, hard to make appointments with. (Economics)

Who is my academic adviser? I'm not being facetious, I honestly don't know. I have people in my department that I go to for advice when I need it, but they are not my official adviser. I have no idea who technically holds this position. (Economics)

Since advisors aren't linked to students, your advisor constantly changes and it's hard to know who you should be going to see. (Economics)

Well, once I switched concentrations, I never got an academic advisor, so I don't even know who mine is. However, my department has several advisors all with various office hours, so I have met with them without any troubles. (Economics)

I think advising here is poor in general there is a large disconnect (Economics)

the academic advisor in my house makes no regular attempt to contact all the concentrators on an individual basis. (Economics)

It can only work well if you really know your advisor, which requires seeing that person more than just once a semester to get your study card signed. Unfortunately, it seems like most advisors think that signing is their only responsibility, so they don't try hard enough to get to know their advisees. (Economics)

I don't really have an academic advisor right now. Besides, the one I had during sophomore year wasn't really my main source of advise. I don't think that the program works very well: you seldom see your adviser, and he/she is not always very useful. (Economics)

It is much nicer to have an academic adviser in your house. (Economics)

Proctors as advisors are terrible. They have no knowledge about fields unrelated to their areas of study. (Economics)

having your adviser's cell phone number. i'm able to contact her anytime. (Economics)

My proctor has a bias towards the humanities and continually tells me to pursue something in that field. But overall, he's all right. (Economics)

It's there when you need it, I just don't really feel pressed to use it. (Engineering Sciences)

My academic advisor is easily accessible and I see him around a lot within the department. This is mainly due to the fact that engineering department is a small concentration. (Engineering Sciences)

Could be more efficient (better use of professors' time, more spread out meeting times—not just in shopping period), a virtual advisor for simple questions would be nice... (Engineering Sciences)

Knowing most of the solutions to my problems has always facilitated quick resolution after discussing them with my advisor. (Engineering Sciences)

I have not had any need for an academic advisor outside of picking the right classes at the beginning of each semester. (Engineering Sciences)

He's sooo far away! (Engineering Sciences)

maybe i am not taking advantage of it, but i dont feel that they are a big help, and have not helped me yet. i would like them to play a bigger role. (Engineering Sciences)

Academic advising works really well, and I am lucky to have a great advisor. However, some people have advisors who are inaccessible or uninterested. Also, off-campus advisers are really difficult to meet with, having a proctor who is also your adviser makes everything so much easier. (Engineering Sciences)

Never really assigned an advisor. (English and American Literature and Language)

The difficulty with academic advising is sometimes our problems seem kind of dumb so we don't always want to ask. It would be better if there were more mandatory meetings with our advisors! I think Harvard students are really really confused about what they want to study, what they want to do with their lives and really need someone to force them to sit down and just ramble about their ambitions. Half my friends are switching concentrations and a bunch of them are really conflicted. I think Harvard really needs to force there to be more contact between advisors and students. I think

Harvard assumes we all know what we want to do but we're all pretty scared and confused. I know that I'm incredibly conflicted and I've tried to meet with my advisor but he is totally busy all the time! it's getting really annoying and I've sort of given up on him. It's hard to go to someone and talk about all your problems if you feel like they're too busy or totally uninterested. I think advising is a really big problem at Harvard, I think kids would get along much better if we are forced to sit down and informally chat about where we are going with our concentration, why we are pursuing what we're pursuing, etc. (English and American Literature and Language)

I am only assigned a non-concentration advisor, and have no set academic advisor for my concentration, English. I love my non-concentration advisor, and see him quite often, but know almost nothing about the general English advisors. (English and American Literature and Language)

Now that we're in a house it seems like less of a deal because we've been through the process before – basically freshman year we had no idea what was going on. but with the academic advisor, i dunno, you don't really need their help, and in a lot of situations they are not authorized to sign your study card, so it seems less important to get their input than maybe a person who has taken the classes you want to take, etc. (English and American Literature and Language)

Anytime I need her, she's there. I never need her during shopping period because...well, I'm shopping! (English and American Literature and Language)

I'd like more advising. (English and American Literature and Language)

I am a transfer student and thus had to find an advisor myself in the department–i wasn't assigned one. (English and American Literature and Language)

i dont even know who my advisor is. (English and American Literature and Language)

I was wondering who my concentration advisor was and the English Dept said we didn't get one, which would have been nice to know at some point. I think this is stupid because then you go there for advice and just talk to any old random person. Dan Donoghue in the English Dept is super-nice and helpful. (English and American Literature and Language)

I put NA for availability of my advisor during shopping period because I didn't know who my advisor was at that point. ¶ (English and American Literature and Language)

I like how the advisors are there if you need them, but not on your

back all the time. I like having them as a resource that I can choose to or choose not to use. I haven't yet needed academic advice, but I know it's there if I do. (Um, yeah, academic advising. I don't use it. I'm not exactly sure what it's supposed to accomplish. If I want advice on whether to take a specific class I generally talk to the professor of that class or to students who have taken it. I just get my study card signed by Inge Ameer or someone in the department, which is a lot more convenient than setting up a meeting with my adviser.)

English and American Literature and Language

The idea that there is useful advising at Harvard is funny, if it's ever discussed. (English and American Literature and Language)

There's one lady Inge Ameer in the English Department who's just amazing. She's so great and I always go to her for advising. She's always busy but reading period is an especially tough time to get her. I know that many other English faculty offer advising, but I always go to Inge. (English and American Literature and Language)

I don't really talk to or see my adviser much. If I need advice, I'll talk to a professor in the dept. (English and American Literature and Language)

Departmental advisors should continue to publish office hours year-round in widely distributed newsletters. (English and American Literature and Language)

In English, it's really nice, because practically anyone can advise or sign a study card, so the people who enjoy it, do it. It's rough not having someone who specifically looks out for you and not really getting any advice unless you go out of your way, but the benefits outweigh the costs. (English and American Literature and Language)

I hardly ever make use of it. (Environmental Science and Public Policy)

Academic advising is generally poor. My concentration (ESPP) does not have advisors within the house, and thus I am not on par in terms of accessibility with my counterparts who are in a more popular concentration, such as psychology or biology. (Environmental Science and Public Policy)

He is based at the Kennedy School, and has a very busy schedule, so it's sometimes hard to arrange meetings outside of his office hours (which are a little inconveniently timed). (Environmental Science and Public Policy)

ESPP has a very good advising system because the concentration is so small. Having actual professors advise is helpful; ESPP also has

a concentration coordinator, a person who knows about ALL the details of our concentration but who isn't an official advisor or professor. She is the most helpful, actually; I think most concentrations could benefit from that. (Environmental Science and Public Policy)

my freshman year proctor was awful & knew nothing about the classes i should take and what was required. make them fix that!!!! also, advising here, even in small concentrations, is not all that frequent or helpful. (Environmental Science and Public Policy)

The freshman year advising system is a complete joke. My advisor knew nothing whatsoever about undergraduate life, courses, or really anything at all about the way life at Harvard worked (she was a first-year building manager at the law school – how could she answer my questions about the core?) Since then, though, my experience with academic advising has been fantastic. Deborah Foster, who advises Folk and Myth concentrators, is a wonderful, thoughtful, reliable, and accessible guide through all the important steps in an academic career, and she is really remarkably knowledgeable about all the things one might need to know (or if she's not she can list off half a dozen names of friends who are). (Folklore and Mythology)

In Folk & Myth it works great since we are such a small concentration - we all meet with the head of the department. (Folklore and Mythology)

You have to find out who it is on your own but sometimes don't need it. (Government)

Formal advising is practically non-existent. All I know is that I need a signature from some guy that I don't know, who doesn't really know anything about me before I can enroll in my courses. (Government)

i don't know my advisor. he sends emails to the house, but he should force us to come talk to him so that we can at least know him. he wasn't even in town to sign my study card. frosh year, my advisor wasn't even in education. not much help there. i suppose i could take it upon myself to seek out guidance, but i don't b/c i am part lazy and part (Government)

Not much a relationship, but my advisor is there for me when I need him. (Government)

I actually don't even know who my academic advisor is, if that is any indicator about the merits of this mysterious academic advising system. (Government)

Our advisors need to do a better job of reaching out to us. (Government)

i have no idea who my academic advisor is. not much informa-

tion provided as to what resources are available to me for advising.
(Government)

I never see my advisor but so far haven't found his advice particularly helpful anyway, as he cannot relate all that well to my situation.
(Government)

more rubrics for ways to creatively tackle the core would be nice. I hate the idea of taking all the crappy classes that currently fill up the core and would rather use classes in specific departments, but this is difficult, because I can't gauge the difficulty of intro bio class for a gov concentrator who is not well acquainted with the science.
(Government)

I feel as though advising at Harvard is minimal. Last year I went to meet with a premed advisor to find out whether I should take Chem 17 or Chem 20, and she looked at me blankly and said
(Government)

None of my advisors seem to have comprehensive knowledge of the courses I'm interested in or other applicable information either within or outside of my concentration. (Government)

tutor system good, ca system bad (Government)

As a gov concentrator, I don't have an advisor. I don't count the CAs who hang out at the GTO as advisors - you show up and they don't know who you are. I've never gotten academic advice from one of them - you have to find people to give you advice on your own. (Government)

Never participated with academic advising other than just getting paperwork signed off on. (Government)

gov is a huge department - no personal interest in students...advising is impersonal and casual. (Government)

I never use my advisor, although I should. Its a lack of motivation on my behalf and a general disillusionment with everything Harvard.
(Government)

I don't particularly care to be advised. I know what I want to do so I'd just as well want my advisor to leave me alone. (Government)

It was on my part to contact me and make arrangements. (Government)

Advisors want to help, I feel and do a good job overall. I think people gripe because they do not take initiative far enough in advance to secure helpful advice. It's always (Government)

I'm in Gov, hence I basically have no academic advisor whatsoever. I've met with him perhaps twice in 3.5 years. (Government)

Good having my advisor (proctor) in the dorm so I can just go down-

stairs and knock on the door when I have a question (Government)

My advisor is great. There is no problem. (Government)

My advisor is excellent. very helpful. (Government)

having an advisor that isn't a proctor (Government)

I'm a freshman, so I'm not positive what you meant by academic advisor. I'm pretty sure my PROCTOR is both my residential and academic advisor. (Government)

New courses/professors were hard to judge for quality (Government)

He's a great adviser, who seems genuinely interested in my progress. (History)

In the history department, the academic advisor is a grad student living in the House, so s/he's very easy to contact. I'm in a fourth year masters program in EPS, and for that my academic advisor (a tenured professor) is very easy to contact by e-mail. (History)

The house tutors for history do their job really well. (History)

I have never contacted my academic advisor this year. I probably should at some point. (History)

I have had no contact with my advisor, and wish he had contacted me once, at least. (History)

They don't follow up with their students, thats a serious problem—somebody has to make time for the students (History)

I adore my house history advisor. She is AMAZING! I think this system works well, but only because i lucked out with an amazing advisor. If I didn't have her I feel I owuld be stuck. My freshman year advisor was nice, but not particularly insiteful—he was a grad student who went to a state school and had no real clue about what harvard undergrad life was like....it was hard to really ask him questions—even though he was a great guy! (History)

There should be the possibility of changing your advisor if you don't work well together/don't have a good relationship with them. (History)

I'm a little confused about how the system works. We have concentration tutors in our houses, departmental advising, resident tutors in our entryways...a lot of advisors, but I don't meet frequently with any one of them to discuss academic issues. (History)

I think faculty advising in the history department can work very well as long as students take the initiative to meet their faculty adviser and discuss interests. (History)

Seems almost superfluous, really. (History)

If you are not writing a thesis there is very little that an academic advisor can do to actually make this place easy. (History)

I don't have one advisor, but many. None of them really know me, and I don't know who I should go to to answer certain questions. It would be better to have one advisor that I knew really well. (History and Literature)

My academic advisor is my thesis advisor so I see her every week. It has always been my tutorial leader except for when I was abroad and then it was the assistant to the director of studies who was not super easy to get in touch with but I was abroad which added to the complexity of it. (History and Literature)

Academic advising at Harvard is too dependent on concentrations. For me, it works out well (hist and lit has really great advising), but for many, it does not. Also, I have never met with my Senior Tutor and he does not know my name or my face. This seems like a flawed system. (History and Literature)

As a History & Literature and History of Art & Architecture concentrator, I have tutorial in both concentrations every week, so it is very easy to discuss academic issues with my advisors... (History and Literature)

I found that freshman year, while my advisor was always available and willing to help me, he didn't always have the best advice to give... didn't tell me that I should have taken the Cores I knew were going to be unavoidable (like QR), since I was undecided at the time. Instead, I took classes that now count only as electives... (History and Literature)

Hist and Lit has wonderful advising! I've had plenty of access and great help from a very knowledgeable source! (History and Literature)

Advisors need to be more available during shopping period - Hist and Lit advising is great most of the time, but because tutor turn over (from junior to senior year tutors, for example) happens at the beginning of the school year, sometimes it's hard to get attention during shopping period. (History and Literature)

In Hist. and Lit., my advisor is also my tutorial leader. Since she herself is my biggest problem this semester, I can't really go to my advisor to complain. (History and Literature)

It would help to have academic advisors who attended Harvard and are familiar with the undergraduate system, professors, assignments and courses. (History and Literature)

In the History of Science department, each student is not assigned to a specific advisor... I like this system a lot, since it means I can

approach the entire department (or the most appropriate members of it) with my questions, and still build close relationships with the department members through tutorials, etc. (History and Science)

I find that e-mailing for an appointment is more efficient than going to (History and Science)

Don't really do it. (History and Science)

I'm kind of unsure of what my academic advisor's role is. (History and Science)

I don't know who my advisor is. I feel my concentration is bad with advising in general. I could probably use better guidance in this respect. (History and Science)

I'd like a concentration advisor in our house, rather than in the department office. (History and Science)

don't really have a specific advisor: ¶ there's no hist and sci tutor in dunster house, ¶ and my concentration hasn't assigned me to someone in the department. ¶ but whenever i need help, i just email different professors, and they're always glad to meet with me. (History and Science)

Academic advising is great, within both of my concentrations. What could be easier? I just e-mail, call, or drop in on my advisors, or any other faculty member in the department. It's not as though anyone would refuse to meet with a student asking for advice! (History and Science)

In my primary concentration, which is the only one I've had official experience with, it's been great. Since it's a small department, I'm able to find my advisor pretty much whenever, and talk to someone else in the know if I can't. In NELC, the informal advising has been outstanding and I haven't felt any sense of being lost or uninformed or unhelped. thumbs up (Linguistics)

my academic advising has been different each semester. this semester my advisor is my tutor in a one on one tutorial, so i see her regularly and often discuss my academic planning. (Literature)

My academic advisor is easily accessible and friendly. However, he is rather unhelpful. (Mathematics)

I don't really feel like I have a great academic advising system within the math department--the professor I have is nice, if shy, but doesn't seem to have time or make time for advising meetings. My freshman advisor, however, worked very well for me (and I still meet with my freshman advisor), but the concentration advisor just isn't working for me. (Mathematics)

Our department tutor did advise me during reading period and very

well. (Mathematics)

It doesn't seem to happen. Advisors will either promote their own agendas or say (Mathematics)

I don't have an advisor. I just went to the head tutor to get my study card signed. (Music)

Admittedly my music advisor was new this year, but he didn't remember me at all the second time I came, I had to repeat myself a lot, and music isn't a huge faculty - as a tutor he should be a lucky one, I figure. He was also a bit surly and mean the second time I saw him. The first time he was nice but both times he was unhelpful and unhelpful. ¶ (Music)

My adviser is a visiting professor and is also new. He didn't give me very helpful advice. They should have more experienced professors doing advising. (What works poorly is that I have SEVEN academic advisors, and a few off campus house advisors I've never happened to meet... There's just too many, I think. I end up seeing each of them once, maybe. I'd rather just have one or two rather than feel guilty about not seeing all of them. But that's more of a personal neurosis. My bigger beef as a joint concentrator is that I don't have anyone to span both disciplines.)

Philosophy

I've found other advisors besides my assigned academic one. (Physics)

The Physics department is great! There's always someone to help me. (Physics)

It's fine. I feel like I can talk to any of the professors in the department if I need advice. (Physics)

Advisors force you to come to them, be nice if they also had incentive to speak to you (other than interest) (Physics)

It worked well that I got someone in the physics department, but she didn't know a lot about the other departments. (Physics)

There needs to be better matching of student interests and advisors. (Psychology)

I get most of my advice from other people in my department (other grad. students, undergrads, professors etc) and not from my academic advisor. (Psychology)

My adviser is always available. (Psychology)

talking to students in the concentration who have taken certain classes or had certain problems works best (Psychology)

Emailing always seems to work. (Psychology)

thesis advising is hard (Psychology)

My advisor is great, and she lives in the house, which I think is very helpful. She is always responsive to emails, and I see her around the dining hall, etc, as well which makes it very easy to get in contact with her. (Psychology)

Perhaps this is the case in other concentrations or with other advisors, but it would be nice if advisers put forth a greater effort to reach out to students. At times they can be unapproachable. (Psychology)

I think all the necessary signatures are a big pain. (Psychology)

My (Psychology)

No guidelines, so my advisor never holds office hours or meetings...instead it is up to the student to show initiative if they wish to see their advisor... (Psychology)

it's very anonymous (Psychology)

It's very convenient to have your concentration (academic) advisor in your house. (Psychology)

No comment (Psychology)

I don't even know who my academic advisor is. (Psychology)

I prefer to speak to tutors in my house, as I don't know my academic advisor and it seems so formal to arrange a meeting with her when I just have a couple of questions. My 'mentorship' in the Psychology department is ridiculous, as it never happens, much like my meetings with my faculty mentors in my former concentrations, Computer Science and Chemistry and Physics. (Psychology)

Freshman advising seems to be particularly poor. In psychology, your concentration advisor is really just there to sign your study card. They also have a faculty mentor program in place so you will have a way to get more serious advising. It works moderately well, although professors tend to be busy and inaccessible. But the program is new, so I think they will continue to improve it. (Psychology)

I feel that Harvard needs to improve its advising system. I find that as sophomores just entering the concentration, we are given very little guidance. Honestly, if I had a serious academic question or problem, I wouldn't know who I was supposed to go to. (Fortunately I work in a lab and can get advice from grad students there, but if it weren't for the lab, I don't know well enough that I'd feel comfortable talking to.) Essentially Harvard's attitude toward advising is that we must come to them with questions and concerns. They put this under the guise of the ideal of (Psychology)

Its easy to get in contact with email (Psychology)

My freshman year, I was assigned an actual professor of psychology as my advisor. He was a strange man, but at least he was familiar with the department, the professors, and all the red tape at Harvard. Since then, however, I have had a graduate student as my academic advisor. He is a nice man (also strange), but he is absolutely worthless as an advisor. When I went to get my study card signed sophomore year, he actually asked me IF he was supposed to sign, and if so, WHERE. Whenever I ask him a question, he directs me to a website that I've probably already seen. There need to be higher standards for academic advisors. We should cut out the required Senior Tutor signature (I never even talk to mine, anyway) & the equivalent for the freshmen. I also think that students should have more contact with the head of each department or someone of similar knowledgeability – I am in frequent contact with Undergraduate Head of the Psychology Department, and the man is a gem. He gives me more and better academic advising sooner, more willingly, and more often than (Psychology)

My academic advisor is my psych tutorial leader, and so we see each other a lot. (Psychology)

As wonderful as my advisor is, it works well to not rely solely on one individual for academic help.. I find that a number of faculty and tutors are willing and able to provide helpful, relevant concentration advice. (Psychology)

I don't really need it. I just go when I have to. (Psychology)

My academic adviser also happens to be a TF I've had in the past and have again this year, so he knows me and the classes well. He's famous for being a caring adviser—the first days of shopping period, he shops the classes and gives us written reviews of all the classes! I know it is very very rare to have an adviser like this in my concentration, so I feel very lucky. (Psychology)

I know nothing about it. Better program to inform freshmen about academic advising. (Psychology)

I have an advisor who does not teach in the college (he teaches at a grad school). He's a great person, but can't really advise me in any real way – I find myself telling him what my requirements and options are. I don't think it's a great idea to have someone that disconnected from the actual college as an advisor. (Comparative Study of Religion)

I'm thrilled in Religion. (Comparative Study of Religion)

The academic advising system is excellent in the religion concentration – they are always there for the students. (Comparative Study of Religion)

Smaller department overlap resulting in few advisors for too many advisees. (Romance Languages and Literatures)

Advisor for Romance Studies is busy and has all Sophomore concentrators as his advisees so he is generally busy and has less time for individuals, especially during shopping period when it is the most crowded. (Romance Languages and Literatures)

It depends on the department. I think being in a small department makes it easier to have one-on-one contact between student and advisor available on a regular basis. (Romance Languages and Literatures)

I have a non-residential advisor and he is very good about emailing me to check in. (Romance Languages and Literatures)

none (Sanskrit and Indian Studies)

in social studies we get paired up w/ random people, that change every year (at least for me) and do not really have any knowledge of me or my particular interests and thus do not know anything about specific classes im interested in or even about professors or anything like that, though granted its harder cause for social studies cause can choose classes from such a broad array of sources (Social Studies)

Advising is the weakest part of the Harvard's undergraduate education. (Social Studies)

Terrible. Uninterested, uninformed, impersonal. (Social Studies)

My advisor sends out an email with specific slots available for advisees, and requires a shopping period and mid-semester meeting. It works very well. (Social Studies)

My freshman year advisor was amazing. I met with her multiple times during both shopping periods and several other times throughout the year as well, twice over meals. she was very interested in my life, health, & happiness overall—not just my classes or academic pursuits. she also knew everything to be known about any class I was interested in and was extraordinarily helpful in the academic arena. ¶ (Social Studies)

concentration advisors are sometimes unable to help with decisions about courses outside concentration requirements (such as core classes). (my advisor this year is my tutorial leader. because I was accepted into my concentration 2 days before study cards were due, I talked to my academic advisor once for about 15 minutes about my fall classes. Luckily I had already spoken w/ my freshman year advisor so I had had some advising to help me pick classes to shop. My academic advisor this year is definitely a lot less involved in my life (other than leading my tutorial). ¶ but he's not bad—I guess it's just the difference between being a freshman and being a sophomore.

¶ I have heard a lot of negative feedback from other people about inadequate freshman & upperclass advising, though, so I know that my freshman year advisor was extraordinary. ¶)

Social Studies

My academic advisor is AMAZING but i know that this is rare for any student here. My academic advisor my freshman year was completely worthless. (Social Studies)

advisors here are bad. its usually the few lucky ones who get good advisors. that's why i choose not to meet with my advisor. if i liked her, i think it'd be fairly easy to meet with her, just drop her an email and we meet. but it's not like she really contacts any of us to check in anyway... (Social Studies)

I really like my advisor, and I like the fact that he's my tutorial leader because it helps us both to get to know each other better than if we only met for advising purposes. (Social Studies)

I have had 3 different advisors in 3 years through Social Studies which has made it difficult to develop any meaningful relationship, short of that needed to obtain a signature. (Social Studies)

I'm not so sure I like having my academic advisor randomly assigned, as there's no indication that he's on my side or even interested in what's going on. I think it'd be better to have an advisor that you already know and have a relationship with, although in the case of Social Studies, I'm not sure how easy that would be to orchestrate. I anticipate changing advisors at the earliest possible opportunity. (Social Studies)

it has worked well so far. My advisor has good things to say and seems like he knows a lot about what's up in many areas of the school (Social Studies)

proctors have know idea what's going on . . . need for real faculty members as academic advisors, or those more familiar with the harvard system (Social Studies)

I love my advisor, but wish I had an upperclassmen who could help me navigate which CORE courses are best and which professors to avoid and such. (Social Studies)

i am not even sure i have an academic advisor. i guess that means whatever the system...it isn't working for me. (Sociology)

My academic advisor is the same academic advisor that everyone else in sociology has; before this year he didn't know my name let alone anything about my academics; I only go to my academic advisor when he's the only person who can answer my question (for questions about shopping, etc, I wouldn't expect him to be the most knowledgeable or give the best advice) (Sociology)

I think it would be good for departments to encourage advisors to meet regularly with their advisees outside of shopping period because that's when you really have time to think about how you're going to plan your course of study. During shopping period I don't have time for that and just go by to get my study card signed. (Statistics)

My academic advisor has no interest in advising undergraduates, and doesn't speak very good English. As a result our meetings are cursory and he barely discusses anything - just makes sure I've filled something in and signs it. That's why I don't meet with him more than once a semester just to sign my study card. In fact, this semester he was unavailable during all of shopping period so I had to ask another professor in the department to sign it for him! I wish we could choose our own advisors, then we might actually take advantage of them. (Statistics)

having an advisor as a professor also - better relationship (Visual and Environmental Studies)

We never really meet up to discuss anything if I don't approach him, which I don't because I feel my concerns are minor. But it would be better if we had a mandatory meeting atleast once a semester just to talk about how things are going. (Visual and Environmental Studies)

My academic advisors have been open, warm, helpful, thoughtful, interested, caring, available, and great in both WS and Hist Sci (Women's Studies)

im a second semester freshman this fall so i no longer had my freshman proctor as an academic advisor nor did i have a concentration advisor cause i havent declared yet so i sort of slipped through the crack and just went to a tutor in my house and he helped me find an advisor (Undecided)

My adviser is very bogged down with her research and it is often difficult for her to find time to meet with her advisees. (Undecided)

As a freshman, I haven't found it too important or necessary. I got a bit of good advice from my advisor, but the whole study card-signing business was more an annoyance than anything else. (Undecided)

It's handy having my proctor as my advisor. He lives right downstairs so anytime I want to talk to him, I can just go knock on his door. (Undecided)

mine's a bit obsessive compulsive and really likes literature. A lot. Once i figured out that literature and the Quad were her two pleasures, I was able to determine which classes would actually be good to take. But that's a different story altogether. She is pretty nice though, well if you show interest in reading at the quad... (Unde-

cided)

Proctor spent a total of fifteen minutes with me. Didn't provide much guidance or advice. (Undecided)

I would suggest that the student's interests for freshman advising be taken into consideration when assigning advisors. It would have been much easier to have someone involved in the sciences versus eastern european studies to help someone interested in the sciences. (Undecided)

Random advisors (ie. not in your field) are not that helpful - it would be great if you could be assigned one based on what you were interested in concentrating in. (Undecided)

The academic advisers do not provide any insights that could not be found in the course catalogue/student handbook...they are generally not very helpful.. the once or twice when I have followed my advisers advice, I later regretted it. (Undecided)

freshman advising done by proctors is great, because they live right with us (Undecided)

Well, its been easy so far, because Nahal Kazemi is a wonderful freshman proctor. (Undecided)

Freshman proctors do not necessarily know anything at all about academics at Harvard. I can contact my proctor for advice, but it wouldn't help me at all - I would do better to flip a coin by myself. (Undecided)

My advisor doesn't know that much about classes (Undecided)

My proctor was of no help to me. He was never around and the one time I did manage to corner him into talking to me he was of no use. He neither knew the course catalog nor anything about any courses or requirements. Shawn is terrible and should not be a proctor at this school. (Undecided)

My advisor is my proctor, which greatly simplifies matters (Undecided)

I like my academic advisor. But her advice is given based on her experiences here, not because she's a professional expert on the system. So the areas she doesn't know about because of her own experiences, she cannot help me with. (Undecided)

My academic advisor really hasn't helped me much at all, although when I sent her direct questions, she responded in a somewhat timely manner, though. During shopping period, she was more available. (Undecided)

works well - but mine is my proctor, who lives across the hall, so he is probably more accessible than most. (Undecided)

having my proctor as my advisor makes it easy to contact him (Undecided)

Good advising overall. (Undecided)

My proctor is a great academic advisor. Although he doesn't know much about specific courses, he knows a lot about general time management and study strategies. I don't think having proctors be academic advisors is a problem. (Undecided)

It's great to have my advisor in my dorm - since I am a freshman - because then I can drop by whenever I have a question. I get along really well with my advisor so it makes it much easier to talk about academics etc. (Undecided)

no advice i rarely see mine (Undecided)

I have a great proctor. Nothing has been bad so far. I am also only a freshmen. (Undecided)

My current academic advisor doesn't know much about the courses or the professors outside her field. She's not always helpful when it comes to recommending courses or methods of completing requirements, nor does she know those requirements. (Undecided)

Nonresident advisors seem to be really great. The fact that they only have three advisees is a real advantage. (Undecided)

Advisors have to be there for anything. They have to realize that they are really important to us and be there for the things that we need. (Undecided)

I haven't met with my academic advisor a lot, but I don't think this is a problem because if I ever needed to meet with her formally to talk about academics, I could do so easily. She is also my proctor. (Undecided)

She is actually great, very friendly, always has a smile, always there willing to help i really really love my advisor, she is great. She also knows a little about everything at least i always feel she has valuable input... (Special Concentration)

My results are probably not representative of much since i'm in a special concentration with an advisor and a thesis advisor from GSD and I don't really have to deal with departments and red tape much. (at least, not since going through the special concentrations petition process.) (Special Concentration)

This is all relative based on concentration. Academic advising in the government department is sub-par and students often go through the process on their own or just ask other students instead of talking to their advisors. (Special Concentration)

D.2 Graduate Student Survey

Question 9. (Optional) What do you think works with the current system for matching grad students with TF positions? (178 responses)

none (Anthropology)

a lot of times an informal system works – the profs are aware (more or less!) of which grad students need teaching, and what their expertise are – so that it sorts itself out more easily (and with less work) than if there were some formal process. to some extent this fosters a system of (Anthropology)

Within your own department, they will try to match you with a course in your field area. (Anthropology)

The department tries its best to ensure that grad students who need to teach, especially for the income, find some type of teaching position or other source of income. (Anthropology)

My department, at least, makes an effort to find something for you to teach in your subject area, even if it's a class that doesn't really need a TF. (Anthropology)

word of mouth is usually the best way to get a TF position (Anthropology)

My program (which is part of a larger department) is small enough that the faculty can speak directly with each student and match teaching desires/preferences to opportunities. (Anthropology)

Our department is pretty good about finding us appointments. (Anthropology)

Most students that need a TF position to support themselves are able to get TF positions. Also, because of the informal system, students generally are able to TF classes in which they are interested. (Anthropology)

Assuming a student has a good advisor there is usually no problem getting sections to teach. However, without a knowledgeable and proactive advisor, students are normally left to fend for themselves. (Anthropology)

We have such a small department that I think the system works well because there is a lot of communication. (Anthropology)

In our department, we are required to teach 2 courses over our first 3 years. Everyone in the department is on a stipend, so there is little competition for TF since it isn't a financial necessity. So only those students who want to teach have to, and that matches the grad students with the TF positions very well. (Astronomy)

Emails from the program office; networking with other students that

have been TFs in the past. (Biology, Medical Sciences)

TFs are taken from the same area of interest as the course. (Biology, Medical Sciences)

I am not sure how the system works. (Biology, Medical Sciences)

E-mail solicitations for Tf's is a good way to make grad students aware of opportunities. (Biology, Medical Sciences)

Posting positions on the department's web site, or emailing all possible students who could fill the position, not just people who the professor or head TF knows (Biology, Medical Sciences)

grad students who actively seek out positions by answering the occasional ad or contacting professors ¶ professors who hire returning TFs ¶ (Biology, Medical Sciences)

It's informal and flexible. It pays well and draws in good grad students. (Biology, Medical Sciences)

I never had a problem trying to teach BS52. There were many openings, and students who need to fill a requirement for teaching always get picked first. (Biology, Molecular and Cellular)

Professors and other students often know what suites the student and ask that student to teach. They also know whose GOOD at teaching, so the same people often get multiple offers – good for that particular grad student. (Biology, Molecular and Cellular)

The existing system (best described as organization by departmental secretary + solicitation by individual profs. and grad students) does an okay job getting all departmental graduate students the number of teaching slots they desire. It also does an adequate job matching graduate student skills to classes. (Biology, Organismic and Evolutionary)

Within the department it works quite well. (Biology, Organismic and Evolutionary)

Department assures that those students that must teach to support themselves get teaching jobs within the department if they desire. (Biology, Organismic and Evolutionary)

see below (Biophysics)

Informality allows flexibility (Biophysics)

In the econ department, there is a great coordinator, Debbie, and she seems to match everyone very well. (Business Economics)

I can't comment on this, because people in our dept have never been matched with TF positions systematically. (Celtic Languages and Literatures)

In my department, all the students are offered to submit their teach-

ing preferences electronically a month and a half before the beginning of the term. However, this only really works for the introductory classes. For the upper level courses, one has to contact the professor directly (and sometimes even to work in his/her lab) to have any chance of teaching it. (Chemical Physics)

The department lets all students fill out an online survey then pairs them with courses about 2 months before the start of classes. Student wishing to make their own arrangements may do so much farther in advance. (Chemistry)

the students who are most vocal get the desired positions (Chemistry)

The key to the whole success of matching grad students to their desired positions is Marion Pipa. Somehow she always gets you the course you like. Amazing. (Chemistry)

If you want to TF for a course taught by your advisor, it is fairly easy to get hired. (Chemistry)

Centrally handled by department, but professors can request specific students to TF (Chemistry)

The courses for which TF's are needed and the number of TF's needed for each course is managed and advertized by my department (Chemistry). This system makes it easy to know what courses are available to teach when one is choosing what course(s) to teach. (Chemistry)

In my department, if you want to TF and your advisor allows it, any initiative on your part will probably land you a position. (Chemistry)

Students who enjoy teaching or are (perceived as) good at it can get pretty much whatever they want. (Chemistry)

Match based on background/interest of the TFs (Chemistry)

An administrator in our department asks students to fill out a form stating their interest in teaching for a given year. This identifies interested students that can be contacted by the professor (or more often the head TF for the course). (Chemistry)

General Note: Chemistry dept. has its own (web-based) system for grad students to tell the dept if/how much they want to teach. Contact Marion Pipa (the chem dept administrator in charge of the system) for details. In my five years here I've always taught exactly as much/little as I've desired, and taught the course I desired using this system. (Chemistry)

I'm in the Department of Comparative Literature, which rarely has TF positions available, so we have to go looking for teaching in other

departments. I get the impression that most departments take care of their students teaching positions pretty well, but obviously are less concerned about people from other departments. The system seems to work well for English and Romance Languages, the departments I've looked for teaching in, but not for Comparative Literature. (Comparative Literature)

The department coordinators for Comparative Literature and English are excellent at getting job alerts out to grad students. (Comparative Literature)

I am not aware of a formal system for matching grad students with TF positions. In my experience, faculty members usually know who would be a suitable TF for a course and talk directly to that student. What's good with this is it usually means being a TF for that course will be beneficial both for you and for the faculty member, and you don't need to go through applications, etc. (Division of Engineering and Applied Sciences)

The good thing now is that the hiring is starting early. (Division of Engineering and Applied Sciences)

Grad students who take the initiative early on can have improved odds in getting the specific TA assignment that they desire. (Division of Engineering and Applied Sciences)

Grad students with obvious interest in a specific course are more likely to TF that course. (Division of Engineering and Applied Sciences)

Not much at all. It doesn't end up with TOO many TFs, I guess. (Division of Engineering and Applied Sciences)

It seems like there are TF positions available, especially if you need one, at least in physics and to some extent in the division. The specific course might not be one's first choice. (Division of Engineering and Applied Sciences)

Only have to TF once. (Division of Engineering and Applied Sciences)

I sought out the professor of the course I wanted to TF. It happens that he had an available position and was pleased that someone offered to TF. (Division of Engineering and Applied Sciences)

Professors teaching a course seem to ask those students who they think are interested in the course material. Interest can be expressed by taking a course and doing well or by having a research area related to the course content. (Division of Engineering and Applied Sciences)

good fit between course and TF (Division of Engineering and Applied Sciences)

What current system? It seems that if you want a position you go ask for it. If your professor wants you to TF his/her class, you have little choice. If you have to TF (DEAS requirement) but have no assignment, you can wait for offerings from the departmental secretary. (Division of Engineering and Applied Sciences)

i am not really familiar with any current system. ¶ (Division of Engineering and Applied Sciences)

If you know a professor they can basically hire you right away. I like how there isn't too much bureaucracy (except for actually getting you paid!). (Earth and Planetary Sciences)

Scramble for TFs in courses where enrollment is larger than expected. No set process for this. No database of available folks willing to TF—nothing but a free for all. (Earth and Planetary Sciences)

I think there are a variety of classes and if you seek out a course you can teach often. But you often have to seek it out. (Earth and Planetary Sciences)

Professors compete for reliable TFs, so we are usually hired very early. (East Asian Programs)

Being able to select grad students for teaching positions, rather than be assigned grad students on the basis of their need for funds. (East Asian Programs)

professor's discretion, so the professor will know to what extent the hired student will know the materiel being taught (East Asian Programs)

Informal networking helps to match students with positions for which they are better suited. (East Asian Programs)

Good matching of students in the tutorial program to thesis advisor. Other positions seem more about knowing the professor. (East Asian Programs)

In my experience, I got to TF classes this year that I expressed an interest in, and I got the number of sections I wanted. (Economics)

The economics department does a great job informing the students about TF positions and matching grad students with classes. The process happens late in the spring, so we have plenty of time to prepare for the fall. Finally, there are generally more positions open than students, so everyone who needs to teach can find a position. (Economics)

At least within economics, there is a greater demand for teaching than there is supply. The department frequently has to hire law students or KSG students. THis is probably because we tend to be well funded and finish in 5 years, so the typical econ grad student

only has 2 years in which they might want to teach. (Economics)

Because our department does it ahead of time and doesn't have its head up its ass. (Economics)

students can pick the courses they're willing to TF for, and then professors get the list of those interested and pick who they want. No one's feelings are hurt and everyone gets to pick what they'd prefer. (Economics)

I think this varies from department to department. There usually aren't major problems in economics, because we have a great department administrator, and there are always jobs available for the introductory and intermediate courses. (Economics)

In the economics department, students (Economics)

There's a centralized matching system for all departmental courses, so it's orderly, but it's also flexible in the sense that private arrangements can be made between the TF and the professor. (Economics)

The way in which the department assigns Tfs to courses via a centralized matching process. (Economics)

At least in our department, there seems to be enough TF slots for those who want to TF. Grad students can number classes as (Economics)

Matching TFs with positions in large courses (core course, large lecture courses in my department, such as 10a and 10b), works well. (English and American Language and Literature)

I TF in a large department (English) where there is generally enough teaching for everyone. We have the chance to rank our preferences for teaching through a form administered by the department and/or arrange things directly with professors. (English and American Language and Literature)

The system of listing preferences seems to work well in most cases for getting people matched up with courses agreeable to their needs. (English and American Language and Literature)

English dept gives plenty of advance warning to the best of their knowledge (English and American Language and Literature)

In my department, there are a lot of courses offered in my particular field, so the range of options for teaching for me is fairly wide. It's nice that a lot of grad students get to work for their advisors. I really like the new system where certain courses guarantee a TF two sections, because it's impossible to live on one section alone unless you're a resident tutor, and it's insanely time-consuming (i.e., no dissertation work gets done) to teach one section each for two different courses. (English and American Language and Literature)

The English Department's system for matching grad students with TF positions is, in my opinion, pretty successful. Grad students apply for positions via a web-based form at the end of the year prior to their teaching assignments and rank the courses they wish to teach in order of preference. The professors are then given a list of interested TF's and can indicate candidates acceptable to them. The Director of Graduate Studies attempts to match the preferences of graduate students with those of the professors, and generally what emerges is quite a good match. The introduction of the web-based application process last year represented a major improvement in this process. (English and American Language and Literature)

Our department is good about scrounging up sections for you somewhere—or at least trying to force the English professors to privilege English grad students. No guarantee, though, that it will be a course you know anything about. (English and American Language and Literature)

There seems to be more demand for TFs than TFs to fill the slots. (Government)

The network of grad students - it tends to work. (Government)

In my department, TFing is a seller's market, so graduate students naturally have an advantage in choosing which classes to teach—if they know about the course in time to plan to teach it. (Government)

In my own experience, there are usually plenty of jobs, and informally students are matched with jobs quite well. (Government)

Informal process, as in GOV, has worked well for me. But, this is because there are relatively few people who can teach what I teach. This makes competition low, and thus gives me a good selection. I can imagine an informal system would not work well for others. (Government)

I cannot think of anything that works well about the system. (Government)

I think one thing that works well is that the system does not limit how much you can teach in a given semester, which makes it possible to teach a lot one semester (if you can find the courses), and then not teach at all the next. (Government)

In my department there are more jobs than students: No one goes hungry. (Government)

I don't know that there is a real -system-. Every time that I have wanted to TF (summer 2002, this fall, and this coming spring), I have emailed the relevant courseheads for courses I was interested in and always received more than one offer, so it works fine from my

standpoint. (Health Policy)

Professors look for students within their department who are interested before going outside the department. (Health Policy)

Eventually, things seem to work out. (History)

If you happen to know a professor who has worked with you, who likes you, and who believes you are competent/qualified to teach a particular class, it is usually possible eventually to find a TF position in one or more classes. Although not strictly relevant to matching graduate students with TF positions, Harvard TFs are well paid. (History)

Having grad students hunt around themselves and ask the profs of courses they're interested in for work seems to be the most effective thing. I didn't get anything based on the forms I filled out in the spring, all I got for this year was arranged at the last minute when an unexpected extra section opened up in a course which had seemed to be full (and which was, coincidentally, the one I was most interested in teaching). Until that unexpected opening due to unpredicted high registration it had looked like I wasn't going to get to teach at all and that I would have to just get the compensatory money since teaching is guaranteed for my year - but I really wanted to teach. It worked out for me in the end, but it was close. (History)

Note re above questions (3-5): I answered (History)

It does not work well. By necessity, everything is done at the last minute. (History)

The History department is very good at informing us of available positions, within the limits placed on them by shopping period. If you have an active advisor, who will advocate for you, you can usually get the teaching you want. (History)

Since grad student interests are usually similar to their advisor's interests, grad students can often TF classes in which they are interested and about which they know something (although I have been told that this is not necessarily true in other departments). (History)

This is necessarily how it works WELL, but an accurate description of HOW it works: professors are much more likely to hire their own students or students they know personally. So despite the fact that I circulated my CV extensively and (History)

When a department has a dedicated and caring director of studies, matching btw. TFs and courses can work very well. This, however, relies a great deal on the know-how and dedication of a single person. (History)

my department is pretty well organized in these matters, my advisor has lots of positions to offer ¶ I have been open to teaching core

classes (History)

Not much. (History of American Civilization)

My success with finding TF positions has always been when the system is informal. Meaning, I find out who is teaching what classes(through an advisor or asking around)and I talk to that instructor myself. I have taught many years and never had a problem finding work. This only works when the department accepts what the teachers ask for (meaning the number of sections etc.) (History of American Civilization)

I found that the system works once students begin teaching in the tutorial program and are known to the department's faculty. (History of American Civilization)

Shopping for courses to TF introduces grad students to a variety of professors. (History of American Civilization)

I'm in a program that exists 'between' two departments but doesn't offer its own courses, so we primarily rely on work in the History and English departments. Since the bureaucracy of these Depts don't exactly have our interests in mind, it is still a good thing that Professors can often do their own hiring and reach outside of their Depts...the work we get is often thanks to these Profs who respect and know us, so I suppose one 'good thing' about the current system is that Profs have the freedom to choose their own TFs. But this is obviously contingent on individual goodwill rather than something predictable or systemic. (History of American Civilization)

Attempt to match students with primary advisors and hence to area of specialization. (History of Art and Architecture)

I think that when things work well, it's not because of the system, it's because of individuals. (History of Art and Architecture)

In my department, students are given priority based on how many semesters they have already taught; thus, students who are less advanced in the program and therefore have less eligibility for dissertation research fellowships are still assured of financial support. (History of Art and Architecture)

In my department, those grad students in their third and fourth years are guaranteed teaching, and as far as I know, they have consistently provided teaching for those students. (History of Art and Architecture)

I've taught for 6 semesters and I have been very lucky that I always had at least 2 sections, and sometimes 3. 3 sections is the ideal number because you can actually live in Cambridge on that amount of money. What works well is that I think I have been rewarded in my dept. for being a good TF (I have good CUE evals, which have

resulted in offers to be head TF). (History of Art and Architecture)

Matching students in courses relating to their own fields (History of Art and Architecture)

Nothing (History of Science)

Absolutely nothing. This is one of the worst systems ever devised. Graduate students have to work extremely hard in many cases just to secure offers; professors can't guarantee the number of sections due to the lack of foreknowledge; graduate students often are left in the dark until past the beginning of the semester about whether or not they will be able to be financially solvent. Many graduate students in smaller departments are not able to teach in their departments, and find it doubly difficult to find teaching assignments in other departments (due to the fact that other departments hire their own graduate students first, understandably) or the Core. (History of Science)

Relevant expertise and interest are the engine for professors to find appropriate TFs and vice versa. (History of Science)

I really like teaching and running sections, there are ample opportunities for me to interact with students and develop teaching skills. The professors that I am working with are extremely generous with their time and expertise—they've been available to help with all of my teaching concerns. (History of Science)

Faculty members who know grad students are able to reference them to available positions. (Information Technology and Management)

Nothing. (Inner Asian and Altaic Studies)

The Mathematics department uses an algorithm to optimize the match between student preferences for course and semester of position with the needs of the department. A position is always available for a student who needs to teach. (Mathematics)

Graduate students working on a (Middle Eastern Studies)

Everybody means well, and are trying to help students who are seeking employment. (Middle Eastern Studies)

In my department we fill out preference sheets in the spring and the hiring process is fairly transparent. (Music)

My department is small so I know of all the possible offerings of greatest interest. ¶ I've been really lucky in getting teaching – not everyone is so fortunate. (Music)

Personal communication with the professor. Strong department chairs who tell professors that they must take graduate students at Harvard before hiring outside. ¶ (Music)

Professor-student relationships. Peer network. (Near Eastern Languages and Civilizations)

When the department matches its students with its own courses. (Near Eastern Languages and Civilizations)

The CORE courses, which offer many positions for graduate students, sometimes even with the possibility of one in a field related to the graduate student's area of discipline. (Near Eastern Languages and Civilizations)

Something that works well is that my department acts as a sort of clearing-house for opportunities within the department. (Near Eastern Languages and Civilizations)

I am currently TFing for my advisor's course, which is the best fit with my own area of expertise. I think it works well to TF for a professor I already know, too. ¶ Also, my department (psychology) sends out announcements about possible openings. (Organizational Behavior)

Varies greatly from department to department. (Philosophy)

Our department's policy has it that the students decide which courses they TF. (Philosophy)

Department has grad students be responsible for determining teaching assignments; assignments are generally fair; determined largely by seniority. (Philosophy)

I think the system works very well in my department (philosophy). I do not pretend to know anything about how it works in other departments. (Philosophy)

Graduate students in our department have a democratic process for distributing available TF positions within the department amongst ourselves. (Philosophy)

In physics, there really doesn't seem to be too much of a problem getting hired as a TF, especially given the fact that all the first year graduate students are given a fellowship for their first two semesters, thus causing a slightly artificial scarcity of TF supply (Physics)

In the physics department, grad students are asked if they would like to TF, and if so, which courses they are interested in, prior to each semester's assignments. I think some effort is made to match students up with their requests. (Physics)

In physics, almost everybody magically gets what they want. I don't know how this works, but a lot of Physics department administrators must work their asses off. (Physics)

It seems that everyone is getting a section who needs one (given that we have people from outside of the dept, at post-docs TFing).

(Psychology)

If certain skills are needed, profs can usually find out through the grapevine what grad students in the department have those skills. Although not always. (Psychology)

Students sometimes get to teach what they want. (Psychology)

For courses that have a minimum number of TFs allotted the spring before, then the grad students who are hired for those positions know sometimes nearly a year in advance what their income will be for the next school year and can plan in advance. (in our department, we hire for positions in April/May for everything we know for the whole next school year, not just for the next fall semester). (Psychology)

Our department elicits preferences from all students about four months prior to the school year. Consequently, students tend to get the classes they want (for intellectual reasons) but they don't always get the number of sections they want (for financial reasons). (Psychology)

Choice of Course. (Psychology)

It is good for professors that they can see who has requested to teach their course and then choose the student who they feel fits their needs best. Unfortunately, this sometimes leads to cronyism in hiring, especially with the (Psychology)

A base number of sections for most courses is readily identified long before each term begins, and many grad students thus receive their desired commitments well in advance. I am perhaps more fortunate than some, because I choose to teach courses in which there usually seems to be a large demand for experienced TFs (sometimes the department is even scrambling for tutors at the last minute when a large influx of switches into our concentration occurs after we've planned for the year). Having taught these courses before, I probably have an advantage in securing the number of sections I would like. (Psychology)

Grad students have the chance to submit their preferences for what they would like to teach in the spring for the following year. (Psychology)

My experience is largely with the Kennedy School, rather than Harvard College. There, they have a survey for students indicating what you'd like to teach, and then these names are given to the course instructors to make decisions. I think this works well, although students with real financial need might get passed over for students who do not, but whom the professor knows well. (Public Policy)

In the humanities, it largely seems to be a matter of your own initiative. That has its good sides. You need to make commitments.

(Religion)

Students have the freedom to contact professors who will be teaching courses that they are interested in being a TF for. (Religion)

The informal negotiation between professors and students, which allows good flexibility on both sides. (Religion)

Support from the Department Office and Administrator (Religion)

The Religion program has a good way for expressing interest in teaching Junior tutorials. For other courses, you have to be aware of what faculty members are teaching. I've always been able to find something. But, this coming semester, there is a shortage. And, as an older grad student, I find myself being blocked out of TFing in favor of younger students. (Religion)

Professors seeking out grad students to teach. (Religion)

As a graduate student relying on teaching to survive, you are always guaranteed a position of some sort. (Romance Languages and Literatures)

My dept has a lot of sections, plus tutorials and a tutoring center which means that people don't end up with NOTHING, even if they don't necessarily get what they want. (Romance Languages and Literatures)

Professors grant positions to grad students who seem most interested in the topic. Since the Professors themselves don't do any of the work, this ensures that at least someone is dedicated to the class. (Romance Languages and Literatures)

Nothing—it seems like a free-for-all. The profs play favorites and tend to go behind each other's backs (and the backs of other students). It would be a lot better if the positions were published on the department web site and there were a brief but well-organized application process. The current system is very unfair, and particularly penalizes those who are abroad. (Romance Languages and Literatures)

Spanish language courses are very successful and there are always plenty of opportunities to teach them. (Romance Languages and Literatures)

From the point of view of grad students, nothing works well. GSAS makes a financial offer upon admission that promises two years of teaching, but the very wording of this survey shows that that promise often doesn't get fulfilled by Harvard. (Slavic Languages and Literatures)

Professors try to let you know ahead of time that you might get a position...but its never sure. (Social Policy)

Allowing Graduate students to choose what they would like to teach (Social Policy)

In my experience, the only thing currently in effect that is a good idea is having graduate students state their intent early, so the department knows if they want to teach and what. The problem is that this information doesn't necessarily do any good if no one knows until the last minute how many TF positions will be needed. ¶ I should note that the reason I was not interested in teaching during the 2002/03 academic year is because I was away from campus doing fieldwork. But I have taught in previous years and hope to teach in Spring 2004. ¶ (Social Policy)

The staff do try hard to match people with positions. (Social Policy)

Profs can cast a wide net, offering sections across GSAS, KSG, etc. (Social Policy)

The current system seems to have eliminated the uncertainty of getting a TF position. This was not the case last year. (Sociology)

Most students eventually find a position, and TF jobs don't go unfilled. (Sociology)

the sociology department does a really good job of matching students the year before positions are announced. (Sociology)

I have found that the TF positions are out there for the students who want them. While I am not teaching now, I have found that I was able to get the teaching positions that I wanted in the past. (Sociology)

Of course, when the system does not break down I have not been able to find anything to complain about. I have always enjoyed my teaching and the hiring process when I got hired. I was hired in 3 consecutive semesters to classes that comported with my interests and skills. (Sociology)

seems to be enough positions, at least in my department (Sociology)

It depends on a Department: in the Classics Tfibng position are offered and arranged one semester ahead, and maximum care is taken that each grad student gets a position, preferably in the area (s)he expressed a wish to teach. (The Classics)

our department does a good job matching us up with desired courses (The Classics)

hmmm (HDS)

Not too much. It is a completely random system as far as I can tell. I feel like it is just luck that I have gotten the assignments I have wanted. (HDS)

Whenever certain classes are offered at the there are an abundance of TF positions available. (HDS)

it builds on already existing relationships between profs and students and builds new ones where tfs didn't previously know the prof (HDS)

The list of courses that will be offered is available ¶ well ahead of time, so that I can think about what courses ¶ I would like to TF. It is also good that the professors ¶ are willing to accept requests from potential TFs. (HDS)

The NELC department, I think, does as good a job as can be expected in matching grad students with their desired TF positions. They send out emails listing courses to be offered, solicit top three (ranked) preferences, and so on. (HDS)

Making positions available to those who have TFed less or not at all, before making the announcement to the general population. (HMS)

Everyone I know that has wanted to get a TF position has obtained the desired position. (HMS)

Question 10. (Optional) What do you think works with the current system for matching grad students with TF positions? (220 responses)

I think that it is great that 3-4 year students get guaranteed teaching however for me since there are not that many courses taught in my department, they (3-4 years) get first choice because that was stated in their offer. For us older grad students, we don't get the teaching. When I was a young graduate student, I was passed over for teaching because the older students got first choice. So for us older students we get left with nothing because of the new system. (Anthropology)

-there is frequently not enough teaching (eg, in Spring 2003, while I only taught two sections [perfectly reasonable load] they were for two DIFFERENT classes, neither of which were in my specialty – a huge amount of work for someone who is expected to be writing her dissertation. ¶ -profs are frequently out of touch with the grad student teaching needs in the department...eg, we have a teaching drought, and that semester all profs decide to offer small seminars on esoteric topics (that wouldn't have TFs) – a real problem. ¶ -the fact that there isn't any (Anthropology)

Communication about classes and TF positions between departments is very poor. This semester, for instance, I would have been very qualified to TF a course on the anthropology of Human Rights, but since that professor is not fully part of the department, I had to track him down and initialize contact with him myself. There is no systematic or centralized way of coordinating TF appointments.

(Anthropology)

We do not know until several weeks into the semester which courses, if any, we are TF-ing for. This makes it difficult 1) to keep up with readings for our own course work as well as 1-3 courses we may TF for; 2) to start sections early on in the semester and to prepare section materials to include (Anthropology)

There aren't always enough classes offered to help everyone who needs work and unfortunately, economics often dictate what class you end up teaching (maximize # of sections), rather than your area of expertise. (Anthropology)

there seems to be no real formal system for offering TF positions, ¶ the CORE sections are TOO big, meaning sections of poorer quality and less teaching availability for TFs (Anthropology)

It's not always clear how many sections of each course will be available, which can make grad students anxious (however, in practice I think the faculty manage to keep everyone solvent no matter what). (Anthropology)

enrollment figure (Anthropology)

living in cambridge is expensive and some of us would like to earn more money than we do. The option of teaching more sections is not always an option. (Anthropology)

I think it is based largely on personal relationships. Advisors get students TF positions. If a student doesn't have strong faculty support they can often be overlooked. Ideally, the system could be more transparent. I think that a preregistration system would allow this to happen. The department would know how many TF positions it had open and then be able to give them out accordingly. (Anthropology)

there isn't enough institutional support to let graduate students know ahead of time whether or not they got a section. i know a friend who is entirely dependent on stipend and therefore needed 2 sections but only got one. there should NEVER be a situation where a graduate student is left out in the cold. i know a number of students where this occurred. (Anthropology)

I think that the salary for being a TF is quite poor considering it appears to take so much time, so much so that we can't do our research at the same time. For those of us who have to TF both semesters in order to have a salary, that leaves very little time to do anything else. (Anthropology)

No centralized listing of available positions. Relies too much on networking, word-of-mouth and mass e-mailings. (Astronomy)

not knowing for sure how many sections you will teach until classes

begin.....hard to plan personal finances (Biological Sciences in Dental Medicine)

I was not able to find a centralized place where teaching positions were posted. I looked at the TF website and in specific departments where I have relevant experience (i.e. biology, chemistry), but could not find a list. Teaching is not required for my program so there are no resources available within my department. (Biological Sciences in Public Health)

Since much of the assignment involves word-of-mouth or familiarity with the instructors, it is challenging for biology graduate students at the medical area to find out about/obtain positions in Cambridge; we are rarely compensated for positions on Longwood area courses. (Biology, Medical Sciences)

Some grad students would be better suited to TAing for grad courses. In my program, TFs for an undergrad course are paid, while the TAs for grad courses are not. This means most students express interest in TFing for pay, and positions are then assigned without consideration of how well suited a grad student is for discussions with undergrads. (Biology, Medical Sciences)

There are more people who want to TF than there are positions available, so it seems that you need some luck to get a position. I got a summer TF position, but I think that was based more on a first-come first-served basis than anything else. (Biology, Medical Sciences)

professors tend to hire tfs from their research laboratories (in particular on the harvard campus in cambridge) it is therefore extremely difficult for students in biological sciences at the medical school to acquire tf positions at harvard undergrad. (Biology, Medical Sciences)

There's no systematic listing or advertisement of TF positions. ¶
Note: My answer to the second part of question 7 is (Biology, Medical Sciences)

Very unclear process for finding out about available TFs (Biology, Medical Sciences)

This is slightly off topic but I wanted to take the opportunity to point out that many medical-area GSAS students (e.g., within the Division of Medical Sciences or at the School of Public Health) teach classes at the medical area. For example, I've taught a section of Genetics 201 (for GSAS students in the medical area) and a Pharmacology block in the Medical School's New Pathway curriculum (for MD and DDM students). In your survey, this counts as not having taught, because I never taught in Harvard College. That's valid, because you're interested in how best to fill TF spots for College classes.

However, I think as a side issue you should bear in mind that a very large number (>500) of PhD students who are theoretically potential TFs for the College are based at the medical area and therefore are less likely to teach sections of College classes, due to the convenience of the teaching opportunities around HMS. (Biology, Medical Sciences)

From my experience, as a Division of Medical Sciences student, there is no effort made to inform DMS students about opportunities to TF at the Harvard campus, or how to go about even finding out about those opportunities. I have had to do quite a bit of leg work to try to become a TF in the past. (Biology, Medical Sciences)

Being in the department of medical sciences, which is located in the Longwood Medical Area, I do not find out about (and am not offered) TF opportunities on the Cambridge campus in biological science subjects I would be qualified to TF. (Biology, Medical Sciences)

Frequently positions are found by word of mouth (Biology, Medical Sciences)

there is no (Biology, Medical Sciences)

There is no way to find out about teaching positions except word of mouth. I would like there to be a resource that alerts students to the teaching positions available (Biology, Medical Sciences)

no specific hiring period ¶ no centralized way to find out which classes/professors are hiring (Biology, Medical Sciences)

Some (very few) grad students are unable to TF the classes to which they are most attracted. This is a problem, but a relatively minor one. Professors currently choose the TF's they want, and while this is not democratic, it leads to healthy atmosphere where the TF's know that they were (relatively) wanted, which is a good thing. I am wary of any universal codifying of the TF hiring process – while it sounds good in principle, it makes the process less intimate, which could reduce the teaching quality in the classroom (unless done in a perhaps-impossibly wise manner.) (Biology, Medical Sciences)

Students in the Division of Medical sciences do not have good access to information about TF positions that might be available. There is no centralized source of information about positions that might be or are open. (Biology, Medical Sciences)

Often the TF's for courses are chosen since they work in the lab of the professor teaching. (Biology, Molecular and Cellular)

In our department, one course is already decided depending on the training grant that funds you. Sometimes – often?– this is a bad match, (Biology, Molecular and Cellular)

The worst feature of the current system is the myriad of different payment rules. It is never clear how much a given teaching load will pay beforehand and the department is often late in paying the TFs, especially in the first month. (Biology, Organismic and Evolutionary)

Across departments it's sort of a joke. (Biology, Organismic and Evolutionary)

Some inequity for teaching multiple sections: CORE and department have two different policies, and within the department, some courses (such as Animal Behavior) require the teaching of multiple sections while paying the TF for teaching just one section. (Biology, Organismic and Evolutionary)

The time (semester) to teach needs to be more flexible and open to first year students. (Biology, Organismic and Evolutionary)

Prior to teaching, I have never received any contract—paper or electronic, nor indication of what I would be paid or when. I just gave someone a verbal OK and checks started arriving and then stopped at some point. For financial planning reasons, I would appreciate receiving at least an email stating the teaching fraction ($2/5$, $4/5$, etc.), my pre-tax income, and the date of the payments (or at least an indication of their periodicity). (Biology, Organismic and Evolutionary)

I am unaware of any infrastructure for matching (Biophysics)

Unless things have changed since I taught, there isn't really a standard system; matching is done haphazardly by word-of-mouth or (Biophysics)

The classes that require TF's and the number of TF positions should be advertised earlier, so one can be more sure that a position exists. (Biophysics)

Informality rewards assertiveness. (Biophysics)

It appears grad students only find out by word of mouth which courses are available for TF. It would be nice to have a central location (website) where students can find out about available TF positions (Biophysics)

Seems rather random with e-mails going out. No idea what positions are open. (Business Economics)

Salaries should be higher. (Business Economics)

Our dept. doesn't have a current system of matching TFs at all. It's each on their own, and there's only one core class every spring that draws any numbers, but often not enough for jobs for everyone, though they were guaranteed to all of us. So in the fall and often in

the spring we are left looking for jobs in other depts, most of which have already been assigned to people in those depts, or others. It can be very frustrating, and is a substantial problem for our students-who have to take out loans when teaching falls through. (Celtic Languages and Literatures)

Advisers are not always keen on their students teaching, and they often threaten them with prolonging their PhD making teaching a dangerous game. (Chemistry)

the students who are most vocal get the desired positions (Chemistry)

Sometimes there are undergraduates teaching a single section when a graduate student would like to teach two sections. At no time should undergrads be given preference to graduates, not even if the professor for the course gives the ok. (Chemistry)

System doesn't attract the TFs most interested in teaching. (Chemistry)

With the exception of freshman level courses, if you want to TF for a course taught by someone other than your advisor, it is often not possible to even get an interview, much less to get hired. (Chemistry)

Since there is no pre-registration for courses at Harvard, there is always some degree of uncertainty about how many TF positions will be available for each course. This situation could be improved by requiring that students pre-register for courses during the previous semester. (Chemistry)

It is slightly more difficult to teach a graduate course and these positions are usually offered to the lab of the teaching professor. There might be a avenue for other students to express their interest in teaching these courses. (Chemistry)

Students who enjoy teaching or are (perceived as) good at it can get pretty much whatever they want, while students who are teaching largely because they must end up allocated somewhat randomly. Also, chemistry TFs are scouted on the basis of information they gave on their applications (as opposed to their course work, for example), which can be outdated. (Chemistry)

TF positions are advertised via word of mouth; this probably disadvantages many students whose departmental administrators aren't up to date, etc. (Comparative Literature)

The Core Program has a more formal selection system. Regrettably, each department has its own system of hiring TFs (from informal selection, exclusively dependent in the professor's criterion, to a priority system), which may lead to some misunderstandings. (Comparative Literature)

Deadlines for expression of interest are not always clear. For example, the English department hires TFs for the entire following year each spring but doesn't publicize their deadline too much outside the department. (Comparative Literature)

a lot seems to depend on words of mouth, connection and luck. (Comparative Literature)

Professors cannot know how many TFs they will need to hire until after the beginning of the semester. This can be variable and unpredictable in literature courses whose enrollment depends on student interest. This is a major problem for TFs whose income and financial survival depend on teaching. ¶ It can also be difficult to get teaching in other departments, even though this is crucially necessary for grad students in interdisciplinary departments such as Comparative Literature. (Comparative Literature)

English department is a clique that is difficult to join in—not just because they have their book that overrides all professors' and students' choices, and because this book must have your name in it by early of the summer preceding the year you wish to teach, and because it favors certain people inexplicably—but because it's just very hard to find enough jobs in English for the number of people who are desiring to teach. Further, the Core program does not alert people in good time which core classes need teaching, nor do they make it very easy to find out. Finally, everything is done so last-minute for getting any job that it's enormous stress for everyone involved. (Comparative Literature)

1. it's often not clear in advance exactly what kind of time commitment will be required ¶ 2. in DEAS, since there is no undergrad curriculum, students TA grad courses only. many of us would prefer to teach undergrads in our area of specialty, but this cross-department TAing is frowned upon. A formal competitive system of assigning TAs (with a clear deadline) would be better for all involved. (Division of Engineering and Applied Sciences)

If a professor cannot easily find a TF for a course, the job tends to default to the grad students that work with them. This happens even if the grad student wouldn't be a good TF for the course for some reason. (Division of Engineering and Applied Sciences)

It is a huge organizational nightmare. We have to wait until students have registered to get the final approval of TF numbers from the department, and THEN go out and get TFs. They come in last minute, unprepared, and frustrated at the (Division of Engineering and Applied Sciences)

Though this is very specific, teaching within DEAS, coming from applied physics is a problem. There are few applied physics courses

and most AP students aren't qualified to teach most engineering courses. With increasing numbers of AP grad students, this is a problem. I know the finances of DEAS constrain the options. ¶ Also, last minute loss of funding presents a challenge to find a TF position. This almost happened to me this year, when my advisor gave me one week's notice that my grant had not been renewed. I did manage to get a position in physics. I have no suggestions how to avoid this complication, however. (Division of Engineering and Applied Sciences)

Many grad students are horrible teachers (and many are insufficiently versed in English to teach in English) and shouldn't be required to teach in the first place. As an undergrad here, I had more bad grad TFs than good. Undergrad CS TFs were far better on average, because they *wanted* to TF. (Division of Engineering and Applied Sciences)

It would be better if there were a (Division of Engineering and Applied Sciences)

When students are approached by a professor to teach a course, they don't feel like they can say no unless they have a good reason (i.e. they are already tf'ing a course). (Division of Engineering and Applied Sciences)

proposed at the last minute (even after the course had begun) ¶ no advertising. (Division of Engineering and Applied Sciences)

The uncertainty of whether you will end up TFing. This uncertainty lasts until one or two weeks into the semester. (Division of Engineering and Applied Sciences)

No centralized list of professors, classes, and TF need. (Division of Engineering and Applied Sciences)

The lack of a system. (Division of Engineering and Applied Sciences)

There is no opportunity to know what TF positions are available – no central list in my department. Different professors hire TFs at different times. This makes it hard to commit to one class when you don't know your options. (Earth and Planetary Sciences)

Need better projections of course numbers (Earth and Planetary Sciences)

I wish there was a listing within the department of classes needing TF's, how many they need, so I can go and look among the classes and then approach professors to teach. Even if a course has all its TF's there should be some central database. (Earth and Planetary Sciences)

The informality of the system might be a drawback for some people. You have to be very proactive about letting professors know that

you want to teach for them. (East Asian Programs)

In my program, I think there were many grad students who needed positions but didn't get them. (East Asian Programs)

general shortage of available positions for qualified grad students (East Asian Programs)

Compared to students in Ph.D, who have more stable opportunity to teach, students in AM program do not get the position even if they want the position more (due to financial straint common to less-funded AM programs) ¶ I guess the positions should be well-notified so that those who want the positions can apply more easily. ¶ (East Asian Programs)

graduate students often have no way to find out what his or her chances of being a TF will be like in the following semester, which makes it extremely difficult to plan ahead. (East Asian Programs)

a professor may not know all the students who have the knowledge to fill the position (East Asian Programs)

One is not guranteed the job until enrollment is in, which is almost life-threatening when it's the only source of income, and it makes very difficult to plan one's term when the schedule has to be adjusted two weeks into the term. ¶ Also, there is simply not enough # of TF positions in East Asia program, which makes some to take up an odd courses (no previous experience nor no relation for one's career), or just starve. ¶ (East Asian Programs)

It may be impossible, but I think as grad students we would appreciate more certainty about whether or not there will be funding for us through teaching work. Often we don't know until quite late, after the term has begun. (East Asian Programs)

The TF's area of specialization does not always correspond with the course being taught. (East Asian Programs)

Lack of clearly presented information about the precise process within the department. (East Asian Programs)

Too many grad students for available positions. I discovered this fact this year when I did desire to teach. (East Asian Programs)

My only experience is with the economics department, and I have no complaints about the system. (Economics)

I think moving to a preregistration system would be a disaster. Part of what makes elite universities like Harvard special is the ability to almost always get a class. Even if it inconveniences some graduate students slightly the benefits to undergrads are worth it from having the openness we currently do. (Economics)

When tfs suddenly decides not to take up a position, the prof usually

picks a backup on his own instead of re-publicizing this vacancy.
(Economics)

International students are limited by law to teaching only 1 course.
(Economics)

Assigning TFs to positions in new courses, in which enrollment is difficult to predict based on past experience, and in those which the department expects to be small (which sometimes turn out to be larger than expected, sometimes smaller). In courses of that nature, I have had the experience of being offered a position that disappeared when the course was under-enrolled, and couldn't hire a TF, and also been in the position of (nearly) having to teach more sections than I wanted, because a course was over-enrolled and the department hadn't hired enough TFs. (English and American Language and Literature)

The fact that nothing is secure until enrollment numbers come in is really the worst part. There is so much anxiety surrounding the process that would not be necessary if there were pre-registration. There is a great incentive for TFs to preference large classes when signing up for teaching (even though the small classes might interest them more) because the assignment is more secure. (Small classes are likely not to make enrollment, and then the TF runs the chance of teaching something totally random/undesirable. There is also a problem for TFs who are offered the position of head TF (since the position doesn't exist unless a certain number of students enroll). I have been offered to head TF (which usually means teaching only one section but getting paid for two) and not being able to do it because of enrollment. This sort of uncertainty makes it hard to gauge how much other work (tutorials, etc) to take on – and because tutorials are commitments to individual students, it is harder to back out of those if the TF situation changes. ¶ [Things have changes from this picture somewhat now that the college has decided to guarantee teaching assignments, but my sense is that a lot of departments and grad students have not yet understood or implemented this change totally. (English and American Language and Literature)

trying to guess enrollments seems simply impossible. I'm all for preregistration. (English and American Language and Literature)

The insecurity of class numbers because there is no pre-registration
(English and American Language and Literature)

Just wanted to clear up what may be confusing or opaque in my electronic responses: I was offered a course and it was then withdrawn because I was accidentally double-booked for two courses in the same semester. But this was anomalous (I hope) and I'm quite content with the matching I've experienced so far. (English and

American Language and Literature)

Grad students should be guaranteed to teach 2 section for one single course each semester so that they don't have to prepare for two courses. (English and American Language and Literature)

The major difficulty in making TF hiring decisions at Harvard is that without preregistration, enrollment is very difficult to predict, particularly when it comes to courses being offered for the first time. For this semester (Fall '03), I was hired to teach for a new course which was thought to be one that would attract a large number of students as it deals with Hollywood Cinema (English 164c, 'Literature and Visuality in America'). As it turned out, too few students enrolled to justify offering even a single section, so I had to look elsewhere for a teaching position. Although I was fortunate to be offered two sections in English 13 (The English Bible), there are clear disadvantages to last minute switches like this. The main one from my perspective was that after devoting time over the summer to reading up on film theory for English 164c and working on the sourcebook, I ended up not being able to make use of this knowledge in the classroom. From a student's point of view, it's obviously far more desirable to have a TF who is well prepared and has a background in the area covered by the course than one who was switched in at the last minute (although I have actually enjoyed teaching for English 13 and am doing, I think, a reasonably good job). It seems to me that some form of preregistration (even a non-binding one) would represent a major improvement on the current situation. (English and American Language and Literature)

That without any kind of sense of the enrollment, you have no idea what you'll REALLY be teaching until the first week of class! 4 out of my 5 semesters teaching, low enrollment has made me lose my original offer and has sent me on my own begging any professor I knew. I ended up TFing for courses where, along with having missed the first week (or more!) of lecture, I was completely unfamiliar with the syllabus and a good deal of the works... It's a disservice to the grad students as well as the undergrads, because we're not nearly as well prepared as we could be. (English and American Language and Literature)

When the department makes the hiring it is not clear, which positions are available and what the financial compensation will be. ¶ In addition to this, there are a NUMBER of graduates from my department who have NEVER been on the job market but instead make a living out of TFing, who were able to build and maintain work relationships with professors so that they are asked to TF for advanced courses before students are being asked. ¶ (Germanic Languages and Literatures)

TFs may have little or no experience with or expertise in the materials they are teaching! (Germanic Languages and Literatures)

There are generally very few classes in ones exact area of study every semester, so you have to teach things you do not necessarily know a lot about sometimes. (Government)

There is no centralized exchange where one can find TF positions offered. Let's get a TF bourse! (Government)

The lack of pre-registration is a big problem. Prospective TFs may accept a sure thing rather than a class they would rather teach (and, indeed, be better suited to teach) because the better opportunity has uncertain enrollment. Many TFs are hired after the semester has begun, or in the week before, limiting prep time. This hurts both undergraduates and grad students. A flexible pre-registration that provided instructors with estimates of enrollment, but still allowed extensive shopping during the first month of the semester, would be a superior system all around, and is used by many similar private universities. (Government)

It's a crapshoot. It's based entirely on word-of-mouth, especially for courses taught by junior faculty. (Government)

The system for matching students and jobs is entirely informal, and the formal rules are almost never followed. This results in students not knowing about their jobs until long after they might have. (Government)

For me, nothing. (Government)

Because classes are not preregistered, professors have NO IDEA what enrollment figures will be like. So, oftentimes, they don't know if they'll need one TF or four. In the past, I've taught courses that were my second choice because the professor teaching my first choice could not guarantee me a position. If preregistration took place during the previous semester (LIKE IT DOES AT ANY CIVILIZED UNIVERSITY!!) they would know already how many sections they would need and how many TFs to hire. The current system is absolutely senseless and leads to far too much stress and uncertainty for graduate students who have MORE IMPORTANT THINGS TO WORRY ABOUT. (Government)

The uncertainty about how many sections (if any) there will be for a given class, which especially affects those grad students whose specialties do not match well with hugely popular classes (eg, the core) (Government)

It is extremely difficult to know which and how many sections one will teach in the coming semester. This makes it difficult to plan one's own schedule and commitments, to say nothing of time to

prepare for teaching. In general, TFs teaching a course for the first time are less than a week ahead of the students. (Government)

One thing that I wish could improve is if there were a (Health Policy)

In many instances, students are approached to TF courses for topics in which they lack particular expertise. ¶ In addition, many faculty wait too long before making TF offers (Health Policy)

Students who do not have connections with professors who teach large classes may not be aware of available positions. (Health Policy)

Problems of matching: 1) The system is completely feudal. That is, TFs with good advisors often get hired because their advisors advocate for them. Or Profs. just hire their personal preferences with no regard to dept. policy or individual need. Other problems don't have to do with other issues besides matching: 2) It's hard to accept offers when you don't know what a class enrollment will be. For example, I accepted positions in 2 courses last year believing that 1 would give me 2 sections. When the numbers didn't work out, the prof. cut my section and I ended up having financial difficulties. 3) Because of no guarantees one often doesn't get paid for their full workload until the second pay cycle of the school year. 4) It's hard to place book orders and have course packs made when there is no sense of how many people will be in a class. Thus, we often waste the first two weeks conducting time consuming and unproductive housekeeping measures in any given course. Conclusion: The system is clunky and cumbersome and shows a complete disregard for the people who have to staff it, a childish attachment to empty traditions, a refusal to make necessary adjustments, and finally a singularly flippant attitude to academics. (History)

Not enough TF positions according to people's specialities. For example, I study Latin American History. There are 15 Latin Americanists eligible for teaching. Originally, only 1 course was going to be offered for 2003-4 that needs a TF. At the last minute, 1 more course was added. So, only 2 Latin Americanist TFs are needed for the entire 2003-4 school year. I'm having to teach at another university (Boston College) in order to teach something about Latin America. (History)

The lack of a pre-registration system is an inexcusable embarrassment to what claims to be the premier university in the world. The current system harms the students. It leads to book and sourcepack shortages in classes whose enrollment exceeds projected enrollment (which, given that projected enrollments are intentionally conservative, is in my experience the vast majority of the time). It means that the first week and half of the term is for the most part wasted pedagogically. It also makes sectioning classes extremely difficult.

Moreover, the current system places unnecessary stress on graduate students, many of whom do not know until two weeks into the term whether or not they will have a job and thus be able to pay their rent, buy groceries, etc. The administrative lags in getting pay to TFs once the term has begun only exacerbate the problem. The single advantage that not having a pre-registration system provides is the ability for students to shop classes, and this would not be removed by the implementation of a pre-registration system. (History)

There was far too little teaching available in my area, European history, due to undergrad disinterest and faculty sabbaticals, so all the Europeanists were strapped for stuff and almost none of us are teaching anything related to what we studied. We still get to teach, in the core, tutorials or whatever, but it's not our subjects, so it's less than ideal teacher training. Still, little can be done about that. (History)

There has to be more attention not only to supplying TFs for all necessary courses, but to making better matches between the expertise of the TF and the subject matter of the class. I turned down 3 teaching positions this semester because they were in areas of history that I have never studied. ¶ Also, the entire TF selection process needs to be more transparent. As it is now, few graduate students understand how it works, and that leads to a lot of resentment and a sense that the distribution of work is very uneven. ¶ The GSAS financial aid office is terribly unresponsive and provides little information about what the (History)

The lack of preregistration means that everything is up in the air until the last minute. Even the guaranteed sections do not work because previous enrollment is not necessarily a good indication of future enrollment. Furthermore, because sections are added late, TF's are not placed on the payroll in time, and, as a consequence, are forced to work without pay for the first one or two months. As a general rule, graduate students lack the financial resources necessary to sustain them during this period of nonpayment. Harvard must either institute a preregistration system or pay us interest on the money it owes us. ¶ Having preregistration does not mean that shopping period would have to be done away with, as students seem to believe. Every other university that I am familiar with has both preregistration and a shopping period. (History)

The shopping period is terrible for TF hiring. The year asked about in this survey went smoothly for me because I was on fellowship. This year has been more complicated. I currently have only one section committed this Spring, which I can't live on. I have one (History)

The uncertainty can be absolutely harrowing. I was lucky last year because I did not need to teach very much, and since I was the

administrative head for the course I TF'ed in the fall, I knew I would have work. In other years I have not known whether I would have work until the very last minute. The second problem is that the availability of classes varies dramatically. I don't know what I would have done if I had needed to teach this year because very few positions were available. (History)

Without preregistration, there is no way to guess how many students might be in a class except by looking at past student enrollments. Because there are so many new classes offered, this is often impossible to do. Two years ago I wasn't sure whether I had enough students for a section until three weeks into the semester. (For me, this translated into 20% of my academic year income – a huge sum.) It is absolutely unacceptable to leave a graduate student hanging like that when our financial situations are often precarious. Many students depend on the money and the experience from teaching certain classes and often there is no way to plan with any kind of certainty for the following year. (History)

Graduate student salaries are not disbursed until after TF positions are secured, and payroll has processed all paperwork. This means paycheck arrive a month after study cards go in. That's insane. Since grad students are contracted to be paid for at least 2 sections, no matter what, why not simply pay them for 2 sections starting September 15, and then disburse any extra money for extra sections later? Besides, it's against Massachusetts state law to pay people more than six days after the end of the pay cycle. (History)

The process seems to be very informal, with half of the machinations happening behind the scenes (between professor/TF) and half happening officially, through the Teaching Coordinator. I understand that shopping period makes this an unpredictable process, but jobs seem to open up at staggered times—which leads to graduate students being matched with teaching jobs which aren't optimal. Were all the jobs open at once, I think hiring could lead to a better fit between individual TFs and the courses they teach. (History)

As a Head TF of a large intro course in Fall 03, I can tell you the system is a NIGHTMARE. Despite having hired several TFs in May, our enrollment ended up being 60 students more than (History)

Knowledge of demand is in some cases just impossible, which means offers are tendered that can't be sustained, or offers are not made (but hinted at) which ultimate should be. This can leave TFs in the dark about what opportunities are available to them; worse, it can lead to turning down offers that ultimately should have been accepted. (History)

professors not bound to commitments: I have never experienced this

personally but have heard horror stories of professors who contact and offer students positions and then retract offers later after students have already turned down other offers. This is unacceptable and some way needs to be devised to deal with this that doesn't make professors wary of promising anything to anyone until a day before the semester. Pre-registration is of course the answer, but all well! (History)

I didn't teach last year because I was on fellowship. This year (03-04) was the last year in which I was eligible to teach. I applied to 3 departments to TF, and to 4 professors within those departments. Despite the fact that I am supposed to teach for my financial aid, I received no offers, even though I have TF experience and good recommendation letters. Fortunately, I have another way to support myself, but I'm glad I didn't need to count on Harvard for my rent & fees money this year. (History of American Civilization)

Extreme uncertainty about knowing what and how much one will be teaching. (History of American Civilization)

The mystery regarding the number of students taking a class can kill someone who already has a small budget. If you think that you are going to have 2 sections and you only get one, you can not pay your rent that semester. I have also had an experience where I taught a class with 25 students and the idiot Harvard guidelines called that a one section class. These people pay way too much money for a section with 25 students, and if I make it two sections than I am teaching twice and should be paid for it! (History of American Civilization)

I had 3 offers retracted after thinking that I was set. This is unfair. In the first case, I was promised two sections, and because of low enrollment, they didn't materialize (leaving me to go to the department and ask for more work although I had earlier turned DOWN an offer because I thought I was set). In the second case, a professor who had offered me a head TF position 8 months in advance took an unexpected leave of absence, meaning the position was eliminated. In the third instance, a professor had asked me (albeit unofficially) to teach in her course, but then retracted the offer since some of her own advisees unexpectedly asked to teach that semester. (History of American Civilization)

Although our department administrator sometimes gets requests that she sends to us, it may help to have a more consistent and formal place to look for positions (the postings from the Chronicle for Higher Ed might be a good model). ¶ (History of American Civilization)

For those of us caught between departments, it's very difficult to

gauge our chances of finding work...we're often the ones who do grunt work without the benefit of future considerations. For example, I've taught a fair share of tutorials and courses for departments simply because none of their students wanted them. When it comes to assignments next semester, this means absolutely nothing--there's no acknowledgment that I helped their Dept in any way and we're often prohibited from applying to teach certain tutorials reserved for 'their' students. I understand that one must protect the interests of one's students, but sometimes I think departments need to acknowledge that a wide range of qualified students are teaching (and are qualified to teach) their courses. (History of American Civilization)

This (above) seems to fall apart for students in more obscure fields -- classicists teaching for Byzantine course. (History of Art and Architecture)

The uncertainty (not knowing enrollment figures until classes have already begun) is really hard on grad students, especially more advanced students with lower priority for teaching positions. Often it means that people end up having to teach single sections of multiple courses, or teach far enough outside their field that they have to do an undue amount of preparatory work to be able to teach the material. (History of Art and Architecture)

Lack of opportunities to teach a class on one's field; although my field is Chinese art history, I'm currently teaching the architectural history course, most of it Western. Although the subject is interesting, I'm preparing for generals this year and so it would have been convenient to teach something in my field; it's a little difficult at times to switch gears because I have to spend so much time learning entirely new material in order to teach my sections with credibility. (History of Art and Architecture)

There are often few opportunities to teach within one's specific field. Several of my grad student colleagues have also been tentatively assigned to one of two or more classes; their official appointment will depend on enrollment, which makes the first few weeks of the semester particularly difficult for those grad students, and ultimately does not benefit the undergrad enrollees because they may not be taught by someone who is adequately prepared to teach that class (short-term or long-term preparation). (History of Art and Architecture)

There is a lot of stress before the assignments are made, especially for the extra TAs who don't have an official offer. I'm hoping pre-registration will help change this - there is nothing worse than thinking you will have enough money to live on and then finding out that you don't have teaching and will need to serve coffee lattes at Starbucks instead. Also, I think the dept. should take into account

teaching when they accept students. Too many graduate students (especially in G3 and G4 in my dept.) means that there won't be enough teaching for them (despite being guaranteed) and nothing for upper years who might not have gotten a grant. (History of Art and Architecture)

lack of pre-enrollment in courses has a very negative effect on the TF assignment process (History of Art and Architecture)

Making students who are unfamiliar or inexperienced head TFs (History of Art and Architecture)

There is, effectively, no system at all! It's just a scramble - either you get tapped by a professor months before, or you have to contact every professor you can think of looking for someone with an opening. And without preregistration, professors can't actually make an offer with certainty. Preregistration would fix all the problems. Some kind of central database of professors looking for Tfs and TFs looking for jobs would be immensely helpful, too. (History of Science)

See above. (History of Science)

TFs are not guaranteed positions sufficiently far in advance. It would be better to have guaranteed funding for graduate students across the board for 5 years, with the issue of teaching considered separately. The expectation would ordinarily be that the student would TF in whichever appropriate years (depending on the department), unless on fellowship support. However, if the student and advisor could not find a suitable TFing opportunity within the Core or one's own department in a given term, then the student would continue to receive their stipend but not be required to teach. This would guarantee funding to all students, remove the stress, and yet keep teaching as an integral part of the graduate experience. (History of Science)

The major problem is that professors have no idea how many TFs they will need until the semester actually gets going. So, you can have several offers and you have to play a game where you try to guess who is actually going to be able to hire you, and do the readings/preliminary work for those classes. You also have no idea how much money you can count on to cover living expenses each month. It all results in a situation that is extremely stressful both from a professional development perspective and a financial budgeting perspective. Because I was still on stipend last year, the year you asked questions about, I didn't realize most of these issues. But this past year, now that I rely only on teaching for support, I have become conscious of these issues. (History of Science)

Not knowing until enrollment is completed if you'll have a job or not. Not only does this wreak havoc with one's immediate financial

situation, it also makes it very difficult to make longer-term financial plans. (History of Science)

No way of knowing what positions are available and for which I might qualify to TF. (Information Technology and Management)

My department made no effort to reserve TF spots in Core Courses taught by faculty with appointments in Inner Asian and Altaic Studies. There is no system in place to place 3rd and 4th year students before 5th year and beyond students. There is no centralized distribution of TF positions, nor is the lack of faculty teaching due to being on leave taken into account. ¶ (Inner Asian and Altaic Studies)

Nothing. (Mathematics)

Terrible lack of coordination (the hiring process is nothing short of a free-for-all); since smaller classes require NO (rather than proportionally fewer) TFs, grad students working on even slightly (Middle Eastern Studies)

It is completely based on personal contact. Either with the head TF or the professor. Then it is first come first serve. It is fundamentally a feudal system. There is no planning as to what the student ideally has to teach for his future career, or in which course he can serve better as a TF. (Middle Eastern Studies)

The lack of pre-registration means that some people lose or gain sections at the last minute. There's no fair way of allocating 2 vs. 3 sections per semester (which is a substantial income difference). Many positions can only be obtained by directly contacting the professor in question, outside and prior to the official departmental preference process, which seems unfair. (Music)

I have no idea what options are available to me through other departments. ¶ I've been really lucky in getting teaching – not everyone is so fortunate. (Music)

The process could be more transparent. In our department, the department administrator works with professors to choose TFs for each course after the students fill out their preferences for the coming year. In some cases, it would perhaps be beneficial for the TFs to have a bit more input in this process as it happens. (Music)

Incomplete institutional memory. Biggest complaint: being told first year of teaching that a course was always reserved for only the most senior TFs and two years later being told that the same course was always reserved for only the first year TFs. (first time I was offered a position, second time I was not). (Music)

Uncertainty in number of TF positions. Interference from the Core Office on deciding how big a section is appropriate. (Near Eastern

Languages and Civilizations)

The rule for giving fourth and fifth year students preference works terribly for humanities students, who are still in classes at this point. it also really hurts students who are not on scholarship, who receive less preference than those on scholarship. (Near Eastern Languages and Civilizations)

When the department has too few positions for its students, and the students must look to the Core, where there are often no appropriate courses. (Near Eastern Languages and Civilizations)

When I first came to my department, graduate students with experience were given precedence over new graduate students such as myself. Nowadays, with the restructuring of financial aid, the departments are under pressure to offer TF positions to students in their 3rd and 4th years before all others. Consequently, many of the courses offered to me (including one covered by formal, written contract) were rescinded and given to graduate students with less experience. This should never, ever happen. (Near Eastern Languages and Civilizations)

Something that works poorly is communication between departments regarding who needs TFs and which grad students still need TF positions. A number of positions in a Bible course in the English department this past fall went to Divinity School Masters students even though GSAS students studying Bible still needed positions. ¶ Also, within my department, classes that have multiple sections are often divided up among multiple TFs with one section per TF. Since grad students in my department must work two sections, this requires numerous people to TF for two different classes. (Near Eastern Languages and Civilizations)

With the exception of core courses, no TF position is secure until enrollment figures are set in the second week of classes (even if a grad student has been (Near Eastern Languages and Civilizations)

Preregistration would help professors plan for how many TFs they would need per course. This in turn would help grad students plan for their own finances, rather than waiting hopefully for a TF job only to find out they didn't get it. (Near Eastern Languages and Civilizations)

Lack of security in TF offers; too much dependency on last-minute class-enrolment figures. (Philosophy)

some section sizes are simply too large, especially the core courses. and there is some inconsistency, it seems, in section allocations. my course had roughly 19-20 students a section before we fought (and eventually won) an additional section which put the count at 16 each. others don't have to fight at all, and yet they hardly have 7

in a single section. (Philosophy)

Faculty has, in recent years, threatened, without cause, to renege on guarantees of teaching assignments (though, in fact, it seems they never had the power to make those promises in the first place). I believe this is moot now, however, since either GSAS or FAS has guaranteed them. Also, while faculty has left it to the grad students to determine assignments, they sometimes add constraints without informing us (e.g., promises to entering grad students of teaching assignments that contradict policies set by grad students). (Philosophy)

The requirements for each course are not really known – and then a department administrator just matches us up. I’ve heard that if you contact the professor yourself, you have a better chance of getting the job (presumably because the professor mentions something to the administrator) – but that’s just knowledge that’s passed down that I didn’t know about at all in my second year. (Psychology)

You didn’t ask about TF positions for Fall 03, during which I was made an offer but not ultimately hired due to lower than expected enrollment. I didn’t know whether or not I would be hired until the second week of classes. This seriously disrupted my plans for Fall, from academic things (there were classes I didn’t audit thinking I wouldn’t have time) to more practical things (I hadn’t bought Thanksgiving tickets to fly to California, thinking I wouldn’t be able to take any extra time off). (Psychology)

no preregistration! ¶ lack of information about what will be demanded of TF’s for particular courses before decisions have to be made (i.e., how much grading, how structured the sections will be, etc.) (Psychology)

The current system for selecting TFs in our department is largely based on cronyism... if it were either largely random or largely merit-based it would be fine, but to have a nepotistic system of hiring graduate students seems unfair to everyone. (Psychology)

Not allowing people who only get funding through teaching the number of sections they need and not giving them preference for the sections they prefer (Psychology)

Some students in our department relying upon teaching to support themselves financially don’t get enough sections to accomplish this. (Psychology)

1) There is no rhyme or reason to how students are chosen to TF particular classes. 2) Professors have a lot of say and choose only students whom they already know. 3) Demonstrably bad TFs have no repercussions against them and can make for miserable experiences for an entire group of TFs working on a large course. (Psychology)

Sometimes students don't get to TF the sections of a class they have expertise in. (Psychology)

Considering that the number of TFs needed for classes in our department is almost always more than the university will give funds for in advance, for those students who are unlucky enough to not be hired for a position in advance, they may not even know if they can make september rent because the rest of the positions are totally up in the air. This is entirely unacceptable, and it is even made worse by the fact that once hired, payment for teaching already done isn't automatic. So on top of the uncertainty, it takes a few more weeks to get BACK PAY for september and often even october. How are we supposed to make rent???? Very Scary. ¶ I personally have never been in that position (though I know many GSAS students who have) b/c I have been a very sought after TF. But I have had the opposite problem which though less serious, I also want to list. A few years ago I was hired in advance to teach 2 sections of an intensive course. We got more students than expected, and they needed a third section. The department couldn't find anyone else who wanted to do it, so there I was second week of the semester teaching a 3rd section. I was earning more than I had planned, but also now having tons less time for research for the semester than I had planned. How can you properly plan your path to graduation when spontaneous extra teaching takes away from this? (Psychology)

As a Head TF both semesters, it was a nightmare trying to determine how many TFs we needed because we had no idea how many sections we'd end up offering. In the end, a lot of TFs got fewer sections than they wanted, and the decision as to who got the extra sections caused conflict among the TFs. (Psychology)

(1)Number of sections. Without external funding, one needs to teach at least 3 sections to be able to afford Harvard housing, groceries, utilities, etc. ¶ (2)Time of assignment. I have no idea if I'll be able to pay my bills until the beginning of October, as the department doesn't tell us how many sections we're to teach until the end of shopping period. ¶ (3)Allocation of sections. Students with outside funding get as many sections as those without, with variances in final check of up to 30,000 dollars. Students with NSF's in our department can make up to \$55,000 when I've never cleared over 23,000, and have had to get outside work as they get equal priority in section allocation. (Psychology)

1. There are large disparities in the work load associated with TF-ing different courses, and this is not taken into account. ¶ 2. Students are not assigned by financial need; students who are already on stipends might get positions before those whose stipends have run out. ¶ 3. There is no check on whether the grad student is actu-

ally qualified to TF the course (this is a particular issue with stat courses). (Psychology)

Seniority, level of experience, and specific course preference seem to play a role, and grad students at the bottom of the totem pole may not be as lucky in their first few years. Grad students who are less experienced or who want to teach in courses for which few if any guaranteed slots are available in advance may be stuck taking commitments for less desired courses or waiting anxiously until after Study Card Day to find out whether they will get as many sections as they wish (and whether in the course they prefer). This does not seem to be as much of a problem in psych as in other departments where I have friends, perhaps because our undergrad enrollment has gone up in recent years while grad enrollment has either declined or stabilized, so that TFs who CAN teach courses are often at a premium. Occasionally, though, enrollment in a given course drops unexpectedly. Two years ago, as the head TF for a huge psych lecture course, I was unable to give extra sections at the last minute to several TFs who wanted and had expected them, because the enrollment turned out to drop substantially when a new prof (who's now getting huge enrollments!) taught it for the first time. That particular term, even senior TFs were unexpectedly in a bind. We spread the pain around (all those expecting to teach got at least one section, and most got two), but no one got 3, although most had wanted 3 and a few had hoped for 4. Ironically, we had predicted a last minute rush on the course, and I had been afraid we wouldn't have ENOUGH TFs! However, I don't think preregistration ever can or will solve this problem, unless we combine it with steps to make drop/adds much harder than they are now; short of draconian measures, students will take advantage of the chance to make changes regardless of what they committed to in advance. (Psychology)

Even when they list preferences, professors tend to pick from those they know (their graduate students) rather than reach out to others who are more interested in TFing the course. (Psychology)

As previously mentioned, need is really not a factor in the ultimate decisions, at least at the Kennedy School. I was offered positions there (not in Harvard College) even though I had full funding from a grant. (Public Policy)

Very hard to find out what's available, and often don't hear about the position until very late in the semester unless it's your advisor who needs the TFs. (Regional Studies - Russia, Eastern Europe, and Central Asia)

In the humanities, it largely seems to be a matter of your own initiative. That has its bad sides. You may miss deadlines and end up teaching something outside the area of your expertise and interest.

(Religion)

Some professors aren't good administrators, and sometimes aren't good at getting back to students about TF positions, and/or aren't good and overseeing and guiding the work of the TF. (Religion)

No clear guideline for both sides about hiring and accepting the offer. I once asked a professor of Government for a TF position well in advance and I thought her answer was favorable, but in the last minute it turned out that she was not thinking about hiring me. I wish I could know it when I asked and did not have to guess what her answer meant. (Religion)

Lack of information in the middle of the previous semester while I would like to contact Professors to seek for a TF position. ¶ Lack of updated information about any possible opening of position in the first week of the new semester. (Religion)

The current system is based largely on knowing people and contacting professors - which is elitist and exclusionary. (Religion)

Not knowing whether you will be hired until two weeks into the semester. This is especially true of the courses I have taught in the Divinity School. It's nearly impossible to make any plans for your own work when you have no idea if, or how, you'll be hired and for how many sections. Bills - which especially mount up when (Religion)

Professors rarely seek out graduate students to teach with! Also: (a) no guarantees about teaching positions: anxiety inducing and financially scary; (b) absence of hiring guidelines (Religion)

I am fortunate to be able to teach language classes as this guarantees a position. However, it would still be much less stressful at the beginning of the semester to know when you'll teach, how many students there will be in your class etc. We manage this to a certain extent by on-line sectioning. (Romance Languages and Literatures)

I'm not entirely familiar with the TF hiring process since I can't TF (as you've defined it) until I have passed my general exams. I am teaching this year, but as a language instructor. I think this makes sense for RLL since right now we're teaching form, whereas once we've passed our generals we are allowed to teach content. (Romance Languages and Literatures)

It seems to depend a lot upon patronage. Advisors look after their advisees-but if they have a lot of advisees, people are inevitably left out in the cold. ¶ A BIG problem is that we have a lot of literature sections which are enrollment dependent (unless of course it happens to be a prof with enough pull to insist on the section regardless). Every semester is like a roulette game where people don't

know whether they'll be able to cover their rent or not. (Romance Languages and Literatures)

In my dept, as in others, TF's can't teach for as long as two months without getting paid for their work, while waiting to see if enrollment is high enough. Often, as happened to me, TFs will never get paid, because the section was dropped. Moreover, the financial uncertainty and ensuing stress creates a tension filled environment during the first few weeks, as everyone scrambles to find enough teaching to pay the rent. Finally, the rules about maximum teaching load are very arbitrary and are often ignored when a favorite student (who perhaps hasn't taken their exams or is still in course work) is allowed to teach 4/5 a semester. Pre-registration and the enforcement of existing rules would prevent the exploitation of graduate students and ensure a higher graduation rate. (Romance Languages and Literatures)

Literature courses, though, are a little bit harder to get. (Romance Languages and Literatures)

No pre-registration (Romance Languages and Literatures)

1) (Slavic Languages and Literatures)

Too little formal interaction between departments with overlapping interests. Enrollments too unpredictable. (Slavic Languages and Literatures)

No one knows how many students are registered for a given course. I think preregistering the students to a course would work best, giving them a two week time frame to add/drop the course. This way, the professor has a better idea of how many students to expect and how many TF's to hire. (Social Policy)

too little formalization (Social Policy)

Having too many graduate students at one time needing to TF to make ends meet, therefore creating a situation where graduate students are TFing courses they have little to no interest in. (Social Policy)

The current system is very poorly run. Most positions seem to be given out through personal contacts (i.e. who the professor knows, or can rope into it), rather than through an equitable system where every interested candidate is considered. The biggest problem is the lack of job security and not being able to know if you can teach and what you can teach until the last minute. This is very difficult for graduate students who are in a precarious economic position to begin with, and often cannot plan how to pay their rent for the upcoming term. (Social Policy)

The flexibility of undergraduates being able to choose their courses

late in the beginning of the semester, is nice for them, but obviously creates planning problems for TFs and professors. In many cases, it results in TFs not knowing how they will support themselves financially during the year. ¶ Also, hearing about open TF positions has gotten more equalized in the Sociology department (which has been very good about standardizing the course offerings and TF applications for them at the same time), but still remains fairly arbitrary in other departments and also where I helped TF – in the core program. (Social Policy)

Some departments indicate that in G3 and G4 years that you will be able to TF to earn money to live on, and then when you get to that year they imply that there may not be any positions available. Those who rely on TF money to live on are not given any real priority in the selection process. (Social Policy)

The process for hiring TFs is not very systematic, at least in my department. Usually professors simply make informal arrangements with students that they know well, and other students may get left without a job or with very limited options. It allows for chance and favoritism to play a large role in the process. (Sociology)

Some TF positions are given to people outside the department (and, in at least one case for a position I wanted last year, outside the university), which does not give grad students a feeling that they will be supported within their own departments. (Sociology)

Professors are unable to offer commitments until too late in the game. My experience is exceptional, not the norm. (Sociology)

Students end up TFing courses they don't have interest or experience in, which isn't generally good for them or for the undergrads. Also, getting a position depends heavily on having pre-existing (positive) connections to professors, which doesn't have much relation to one's ability to teach. (Sociology)

I think that it's a lot of work for the person who has to coordinate the system. (Sociology)

And when the system breaks down it fails horribly. In one semester I had two offers, by your definition, and one additional offer that was too informal to be considered an offer by your criteria. I turned down the first, believing that enrollments would be sufficient to land me the second job. The enrollments did not come through and I was scrambling to find another job in the first week of the semester. I received a formal offer but that was also withdrawn due to low enrollment. As a result I suffered a bad financial setback in my 4th year of graduate study. So in a phrase, the most awful part of the current system is the amorphous nature of enrollments. I would appreciate greater certainty in my teaching life, especially since a

bad outcome can have such dire consequences. (Sociology)

there is a scramble and confusion—I had multiple professors asking me to TF, and my choices were contingent upon others’, etc. Better to have grad students and professors rank their choices, then match them electronically for a best fit—kind of like the medical school residency match! (Sociology)

This whole university system of allowing students to (Statistics)

Not every grad student is capable of Tf-ing every course in a satisfactory way, and people sometimes end up assigned to a course they do not like, or feel they don’t have sufficient expertise to teach. In general, we teach a lot, it takes too much time and energy (which should be devoted to dissertation!), and we are often underpaid (compared to time invested). (The Classics)

The uncertainty of the number of positions available in the Core curriculum; the fact that many TF positions are not secure until the second week of classes; also that many times the estimates are far from the real turnout, so that in that first week of classes we have to scramble to find additional TFs on short notice (and with various scholarly backgrounds) (The Classics)

unpredictable nature of courses that need TFs and the number of TFs needed (HDS)

1. There is no schedule - some professors book their TFs 12 months out; others at some point after classes have begun. There should be a schedule for all to follow. ¶ 2. Many grad students end up TFing anything they can scramble to get at the last minute. It would be useful if faculty would give attention to the TF experiences that would best train their candidates. (HDS)

Some semesters there are more opportunities than TFs and other semesters there are more TFs than opportunities. Also, basing the system on enrollment means graduate student income is uncertain. (HDS)

the reliance on knowing a prof beforehand and asking him or her for a tf position— because they are scarce and often work on a first come first serve basis— means it’s very easy to get left behind and to miss out. (HDS)

No one knows how many students will do the course, and hence how many sections there will be. ¶ Sabbaticals of professors in the same department sometimes coincide, and then the pool of available positions is sometimes small. ¶ Lastly (and this is also a critique of your survey’s wording and assumptions), the system is more complex than you are implying, since there are other Harvard courses requiring TFs besides Harvard College courses – I think of the courses I

TF as Div School courses, though many of them have an entry in the FAS catalog. ¶ (HDS)

In our department, it is on a (HDS)

TF's are not selected by their appropriateness for the class or in any systemic way by need. No clear schedules for selection. (HDS)

Giving preference to those who have already TFed the course. (HMS)

Everything works fine from my experience. (HMS)

Grad students aren't alerted to the need for TFs. (HMS)

At the medical school, it is difficult to find TF positions that are paid. Even those at the Cambridge campus are difficult to find out about. (HMS)

Maybe on the med school we don't hear too much about TF positions for Harvard College... ¶ We are obliged to TA for one semester on the graduate courses of the Divisions of Medical Sciences (on the BBS program), but if we are interested in teaching further it's not easy to find out how. (HMS)

D.3 Faculty Survey

Question: Please provide comments about undergraduate academic advising associated with shopping period and study card signing. (8 responses)

I think advising and preregistration/shopping period are separate problems. The advising system doesn't work in any department (undergraduates don't respond to e-mails, don't come to meetings). Shopping period is disruptive (although not hugely) but the issues aren't connected.

Students should take it upon themselves to seek advice: most of the senior faculty's dorrs in my department are open during their office hours, and they welcome students who screw up their courage and walk in. They need only be respectful of our heavy workload, and use our office hours, or otherwise seek appointments. They will be welcomed.

Students should be advised to meet with advisors well in advance of study card day.

1) Switching classrooms was definite problem due to shopping period; had to move to room with no A/V which had to be handled 2) Ended up with TF with no expertise in course

I think shopping is a good thing because it allows students to get a good sense of a teacher and helps the teachers let students know

what the course will be like

My impression is that students are either poorly informed about the advisory process or reluctant to make use of faculty resources even when these are accessible and granted without constraints

VES has become a film studies department without FAS vote: I see 100 +/- 10 undergraduates every shopping period for general advice regarding visual and environmental studies beyond a VES.

The biggest problem is that advisees do not all come to office hours or request appointments. I frequently have to pursue them.

Main problem is need to repeat introductory material and can't set assignments until after shopping.