

Students' Academic Decision-Making Processes and Their Consequences for Curricular Design¹

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Abstract

Existing institutional means of encouraging or forcing students into certain academic experiences often fall short of their goals because they ignore how students make academic decisions. Careful study of how students choose their classes reveals that students arrive at their final course list through a process of drastic elimination of fields of study, followed by careful evaluation based on the reputation of professors and departments, and then an assessment of the structural limitations placed on their choices. Because students' course "choices" are really a series of various elimination techniques, traditional means of encouraging certain courses, either through distribution requirements or advising, lose their effectiveness. Administrators and faculty need to recognize how and why students choose their courses, and construct their curriculum to accommodate for and even feed off of the social tendencies and habits of students – a kind of "systemic advising" that is built into the curricular choices available to students.

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One of the primary ways institutions of higher education attempt to order and shape students' academic experiences is through distribution requirements – forcing students to make certain choices – and advising programs – coercing them. While these measures are not malicious, they do betray a general suspicion that students are not always the best managers of their own academic paths. Accepting, for the purposes of this paper, that this suspicion is frequently enough valid, the question then becomes what the best form of institutionalized guidance for students is, and how to successfully implement it.

In this paper I will argue that traditional forms of institutionalized guidance – advising and distribution requirements – ignore the largely social, often irrational, and frequently arbitrary process students go through to actually choose their courses, and that the results of this mistake have been that these measures often fail at successfully guiding students towards or away from certain academic paths. While available data are too narrow in scope to suggest that *all* advising and distribution requirements are fatally flawed in their conception, it does imply that these initiatives and programs face significant systemic and social problems that originate from misconceptions of how students choose their courses. In an attempt to help overcome these problems, I will detail the steps students go through to choose their courses, and then lay out possible

methods faculty and administrators could apply to fix existing advising programs and/or distribution requirements. Finally, I will a new type of institutionalized guidance, “systemic advising,” which attempts to take advantage of the decision-making behavior of students, instead of simply ignoring it.

Methodology

The data set used in this paper comes from a longitudinal panel study of 100 students² of the class of 2005 conducted at Hamilton College³ from 2001 to 2005, in which the students were interviewed once each academic year during their four years at college, using a flexible, interview guide of 12 to 15 questions adapted for each year.⁴ Typically, interviews lasted from half an hour to an hour, and were broad in scope – touching on academic, extracurricular, and social issues. One of the main topics students were asked about each year was how they felt about their advising experience, out of which a wealth of data on Hamilton’s advising program, as well as data related to course selection, distribution and major requirements, has emerged. It is from these discussions that the conclusions of this paper derive.

The Effectiveness of Advising and Requirements at a Liberal Arts College

A number of institutions are currently moving towards eliminating or truncating distribution requirements and instituting advising programs, a move generally expected to

² Response rate was generally 70% per year.

³ Hamilton College is a small, residential, elite, 4-year liberal arts college of around 1,800 full time students

⁴ Approval for the project’s study of human subjects was granted by Hamilton College.

provide students with greater academic liberty, closer student-faculty relationships, and more individualized and personal academic guidance. Hamilton has in many ways been a self-appointed leader of these schools, eliminating distribution requirements entirely in 2001 for the class of 2005, and enhancing the role of its advising program by which students are assigned a professor as their adviser and are required to receive their adviser's approval of their classes just before they register for them. The new shape of academic guidance at Hamilton is an interesting experiment in creating a curriculum without boundaries for those interested in higher education assessment – it provides a glimpse of how students behave without structural restrictions on their course choices, though, as we will see, various hidden limitations to their choices still exist.

The institutional rhetoric surrounding the advising program at Hamilton paints it as a project in which students and advisers “work together to craft a unique, individual academic plan” that is “based upon each student's strengths, weaknesses, and goals,⁵ but which also will fulfill one of the central goals of a liberal education – breadth. While the description falls short of laying out distinct goals within the notion of a “breadth of study,” it states the general goals that students “undertake coursework in a wide variety of disciplines... explore areas unfamiliar to [them], and to make connections across courses and disciplines.” Further, it suggests that, through advising, students will be able to develop close student-faculty relationships – professional friendships between academic colleagues that transcend the typical master-apprentice formula.

⁵ Academics: Advising at Hamilton. Retrieved April 4, 2007. <http://www.hamilton.edu/academics/info.cfm>

Hamilton's program, however, has been largely unsuccessful at fulfilling these goals. Institutional data shows that, since the removal of distribution requirements, students drastically decreased the degree to which they took classes outside of their major, and increased their focus in their concentration. Further, students were not developing the close student-professor relationships that were supposed to emerge naturally from advising at a markedly increased rate⁶—instead, students generally viewed their advisers with suspicion and annoyance, and saw advising as a hurdle to overcome, instead of a way to “craft a unique, individual plan.”

The problem with advising at Hamilton, as well as curricular requirements, is that it ignores (or unrealistically attempts to supplant) the actual processes students themselves go through to choose their courses. Requirements *inherently* ignore how students make decisions—they force students to decide *around* the limitations of the requirements. Meanwhile, advising is, for all intents and purposes, the tip of a very large, complicated, and layered iceberg of how students make academic choices. It is, not coincidentally, the only part of the process that most professors and administrators see, and hence is the only part they attempt to manage.

Student Course Selection Process

⁶ Only 13% of students stated that their pre-concentration adviser – the one assigned to them upon entering Hamilton – was someone with whom they had a “close, personal relationship,” compared to the 40% of students who said they had this kind of relationship with their major adviser (whom they chose). Eighty-one percent of students also stated that they had a close personal relationship with a member of the faculty whom was not their adviser – further suggesting that these close relationships arise in the natural course of the student's academic career, and not because they are intentionally programmed into it.

The process students go through, from being handed a course guide with hundreds of classes, to starting their semester's classes, is complicated and layered. The sequence laid out here in diagram 1.1 (at the end of the document) is not universal – for some students the chronology differs, while for others, peer input, for example, is far less important than for others. This sequence represents the most commonly reported chronology of a liberal selection of steps.

Eliminating Fields of Study

A significant number of students pointed out how, immediately, they eliminated entire fields of study, often mathematics and sciences. Justifying this, many students make statements such as “I’m just not a math student,” or “I’m not good at languages.” This is interesting, as it suggests that students view, or tend to describe, success in quantitative and foreign language studies as *dependent on inherent ability*, and not just interest and hard work, as they describe other fields of study.⁷ This initial voluntary decimation, taken by a majority of students, often immediately eliminates up to 90% of the fields of study available to students. Of course, students need a manageable number of classes they can consider taking in order to refine their selection, but the manner in which they go about creating their initial short list is striking, especially given the goal of academic breadth central to liberal arts.

Peer Advice and General Reputation

⁷ Though the majority of these statements were directed at quantitative studies such as mathematics, statistics, and quantitative (often lab) sciences, some students also made similar statements in relation to fine arts.

At various points in their college career, students will seek out *peer advice* about which classes they should and should not take. Notably, this advice is often negative, and focused on individual professors as opposed to specific classes. As we have found throughout the study, the quality of professors is more important to students than the quality of classes – to put this more precisely, students are aware of the extreme degree to which the quality of a class is determined by the professor, and so they frame their discussion of courses in terms of the professors. This extends to students' discussions of disciplines, where students continue to focus on professors as personifications of the academic material, the consequences of which are that *a student's opinion of an entire discipline is largely shaped by their experiences with an individual professor who teaches it*. For new students who have no past experience with any professor, rumor and peer influence, especially from peers of higher grades, provide the necessary information for them to further exclude some classes, professors, and departments, and to become interested in others.

Structural Limitations

Though Hamilton has no distribution requirements, there are still formidable *structural, curricular, and schedule limitations* all students face when selecting courses: pre-requisites, courses closed to certain years, overlapping courses, and courses scheduled at times that conflict with other responsibilities, significantly truncate the available courses students can take. While we might initially think that first-year students face the brunt of the limitations, as they are generally prohibited from taking higher-level

courses and often face closed classes, juniors and seniors are actually severely limited in their spectrum of course selection as well, as they have concentration requirements that consume their choices, and are frequently prohibited from introductory, 100-level gateway classes, as these are considered too easy for them. The result of these limitations is that students in their first semester face an almost exclusively *horizontal* spectrum of course selection – they can typically only take a small handful of courses from each department.

At Hamilton, entering freshmen can choose their first four courses from among 95 in 39 departments – a number that amounts to 21% of all classes at Hamilton in that semester. While none of this is surprising, applying the same methodology to examples of upperclassmen yields interesting results: *upperclassmen are as limited in available courses as first-years*. A typical fall semester senior, for example, can choose from 86 courses in only 21 departments. However at the same time, as all upperclassmen also face internal requirements from their concentration that they must fulfill to graduate with a major, they rarely have the luxury of being able to choose from four classes, and more frequently can pick only two or three per semester. Curricularly speaking, upperclassmen have fewer options than underclassmen, not just in regards to breadth but also in sheer volume of available courses. Their spectrum of course selection is *vertical* – they can primarily take courses in fields they have already taken introductory classes in: 53 of the 86 available courses, in 9 of the 21 available departments, were in departments in which the student had already taken classes. Students with double majors, and students who have gone or want to go abroad, face even greater hurdles, as they must arrange their

courses to both fulfill requirements, and avoid conflicts with their other plans. The spectrum of course selection for double majors is severely limited both because their future class choices must be devoted to their majors, and they tend to have taken far fewer introductory classes outside their majors than single majors.

At this point in a student's decision-making process, they have immediately eliminated anywhere from 70% to 90% of classes based simply on their interests and desire to avoid certain departments, and the selection of courses a student is willing to choose from shrinks even further as friends dissuade them from certain professors and departments. The student's available course options are further truncated to around 20% of all classes, regardless of the student's class year, due to structural limitations. By this point, the student has taken a course catalog of 900 classes, and shrunk down their choices (and found them shrunk down) typically to somewhere between 10 to 25 classes – all before meeting with their adviser, and even before facing the hurdle of registration.

Formal Advising

Finally, when we reach the actual advising stage of the process, students have already made the major decisions with regard to the breadth of their study. Advising meetings *can* have a significant effect on a student's choices, but almost always only within those choices the student has already made. More often than not, however, students state that their advising sessions consist of the student telling their adviser what they want to take, and their adviser then signing their pre-registration form. Even if

formal advising came at a key time in the decision-making process, it is unlikely that it would have a significant effect on the courses students actually end up enrolling in.

Registration

After advising comes registration – another step in the process that is out of the student’s hands almost completely. All students will experience being locked out of a class due to over-registration at least once, and many students will experience this numerous times. Some students interviewed complained that they literally got into none of the classes they initially wanted to, and had to scramble through the course catalog while standing in line just to find classes that had open seats. We are probably all familiar with horror stories of registration at our own institutions, but the true absurdity of the situation is magnified when one considers the existing structural limitations on students’ course selection.

Conclusions

Given both the structural limitations on curricular choices and students’ reliance on peer advice about the reputation in their academic decision-making it is clear that advising, as an institution of the college, and regardless of the student’s academic year, plays too little and too late of a role to be of significance. Further, we have seen the extent to which internal (students having to take classes to complete their major) and external (students not being able to sign up for certain classes) structural restrictions limit

students of all years, and even more so with upperclassmen. The spectrum of students' course selection is far more limited than is generally accepted, and students' methods of choosing classes are significantly different and more self-limiting than we might expect. Given the ineffectiveness of advising, and restrictiveness of instituting further structural limitations on students' choices, how can faculty and administrators fruitfully and effectively guide students' academic paths without compromising their academic freedom?

Based on the findings of our study, we can identify a few ways to create a curriculum and environment that, effectively, directs students along certain paths, and away from others, without creating unnecessary walls or stationing academic police along the way. The important thing to remember here is that a successful program must be implemented with a clear understanding of the students it will effect, and the other structures it may, in some way, alter.

Improving Formal Advising

Advising programs can be effective, providing their goals are reasonable – advising will not be able to reliably prevent students from avoiding what they dislike or fear, without appearing (and, arguably, being) authoritarian. Advising can certainly be useful at preventing weak students from making bad choices, and it can also – in the long term – construct meaningful goals for students, though within the structural limitations present in the school's curriculum. Such programs, however, must be instituted in a way

that makes it possible for them to be effective – in Hamilton’s case, advising sessions must be earlier in the semester, before students have so drastically reduced their choices, and there must be multiple sessions, to develop the student’s short and long-term goals. Further, it must be instituted in a way that 1) accounts for which professors actually advise their students, and which simply fulfill their bureaucratic responsibilities, and 2) assigns the best advisers to the students who best respond to and most need good advising.

Improving Distribution Requirements

Distribution requirements can also be effective means to get students to experience certain material, but colleges must avoid further limiting student choices (which are already so very restricted) while instituting required material.

Further, with both core and departmental requirements, we have to remember the most important thing for student outcomes: *good teaching*. Overwhelmingly, students agree that a good professor can make any material – even required material the student is not familiar or particularly interested in – exciting and engaging. While this has its limitations at the extremes, good teaching remains the key factor in improving a student’s academic experience *of any kind*. If a school or department wants to require certain classes it *must* provide those classes with the best faculty available. This is not just a practical issue, where we want students to *actively learn* this material (that is, after all, the *entire point* of requiring the class), but is potentially even a *moral* one. One could

make a convincing argument that requiring students to endure dull, mistaught, unengaging classes is effectively robbing them of their tuition. Students, actually, regularly make this argument, but typically to deaf ears.

Systemic Advising

Requirements and advising systems, when functioning properly, are not the only ways to effectively guide student academic choices. We all too often ignore the fact that liberal arts colleges are, effectively, *total institutions* for their students. Students spend nearly all their time on campus; they have particular regimes, rituals, habits, and patterns of predictable behavior. Whether school officials know it or not, they have immense power over student habits and everyday behavior: create a new 24-hour coffee shop, and watch student sleep patterns fluctuate. Add comfortable sofas to an underused common space, and watch it grow into a social hub. These same type and scale of hands-on, micro-adjustments can be applied to a curriculum, guiding students towards experiences they should be getting, and away from those they should avoid.

Scheduling is one obvious way to do this. Inquire at any college registrar, and you will find that students will predictably schedule their classes to avoid certain days and/or times of the day, and, consequently, classes scheduled at popular times will fill up. Arrange your best educators to teach at these popular times, and the mass of students who have arranged themselves according to scheduling preferences will find themselves taking amazing classes, and will benefit.

If you want to ensure students get a broad education, have your *best* faculty, *not* your new or junior faculty, teach intro classes. Faculty reputation alone will prompt many students to enroll in courses outside their field, which they otherwise wouldn't have due to their unfamiliarity with the new discipline.

If you want every student to graduate from your institution with a solid grasp on a certain skill such as writing, you don't have to create a seminar for every freshman to take focusing on developing the skill – just saturate your curriculum with writing intensive classes as Hamilton has done, with great success. This method not only prevents you from having to design a new writing course and hire faculty to teach it, but allows your students to develop their skills within academic contexts and classes that they choose, which will directly improve their ability to develop these skills. Again, if you want students to experience certain things, create an environment where they can't avoid it, simply because it is everywhere. Weave it into the very fabric of the curriculum, and students won't even know it's there.

Systemic advising, a title that can encompass all the kinds of initiatives I have laid out here, consists of intentionally guiding students down certain paths by shaping and managing the curricular system to take advantage of students' natural behavior and choice-making tendencies. Of course, the specific forms this will take will differ from institution to institution (depending on the institution's goals for students, and kinds of

students enrolled there), yet there are still some general principles one should mind when trying to create such a system:

1) These initiatives are necessarily interrelated – if you want to require students to experience something, you must design and manage that experience on every level. For example, requiring students to take a certain course is fine, but that course must be well taught, must not eliminate a significant number of other opportunities for students, and must actually provide the intended experience, otherwise the class will not only fail to accomplish its goals, but deprive the student of another class opportunity.

2) Providing the intended experience, whatever it is, requires a careful understanding of students, how they react and behave in a given curricular environment, and what the outcomes of that environment will be for students. In other words, it requires continuing assessment and institutional research to be effective.

3) To make such an initiative effective, faculty must face some difficult facts, namely, that some of them are great teachers, and some of them are horrible teachers. Instituting a curriculum that is designed and scheduled to provide the maximum number of students with the best professors possible, and a minimum number of students with experiences with the worst, obviously, requires recognition of who the good and bad professors are. Faculty will be, naturally, resistant to this. Some will be outraged. However, it isn't as if students don't know who the good or bad teachers are, and they are the ones who matter.

4) This kind of initiative will likely require greater resources, or increased organization of existing resources, mainly in the form of hirings, and some in the form of funding continuing assessment. Hiring good teaching faculty, however, is the key to much more than just systemic advising. The benefits for students are too numerous to list here, but suffice it to say that good professors, especially those who are open to forming close relationships with students, are the most significant factor in improving student outcomes.

Creating a curriculum that all students will experience, regardless of concentration, is part of what determines a college's academic identity. The institution of such a curriculum, however, needs to be about creating an academic environment infused with the important lessons. If you can do this, you can get students to experience what you want, without them having to make difficult or divisive decisions. Students will learn it without even knowing it.

Further Study

There remains a great deal of work, universally important to assessment, in methodological design, particularly in sequence analysis of student's course availability – the diagram presented here is an example of what such work might look like. Ideally, given input of available courses, course restrictions and sizes, registration requirements, pre-requisites, courses necessary for a student's major, and other such structural factors,

such analysis would be able to identify the *spectrum of course availability* for a given student at a given time in their academic career. A simulation that accounts for the variables (pre-requisites, class years, etc...) of all a colleges classes could then quantitatively determine *the degree of a student's "curricular freedom"* – the extent to which a student's course selection for a semester is pre-determined by certain factors – and be able to compare students of certain years and majors. Aggregated carefully, this information could even potentially provide department and even college-level data indicating the true curricular freedom available to their students.

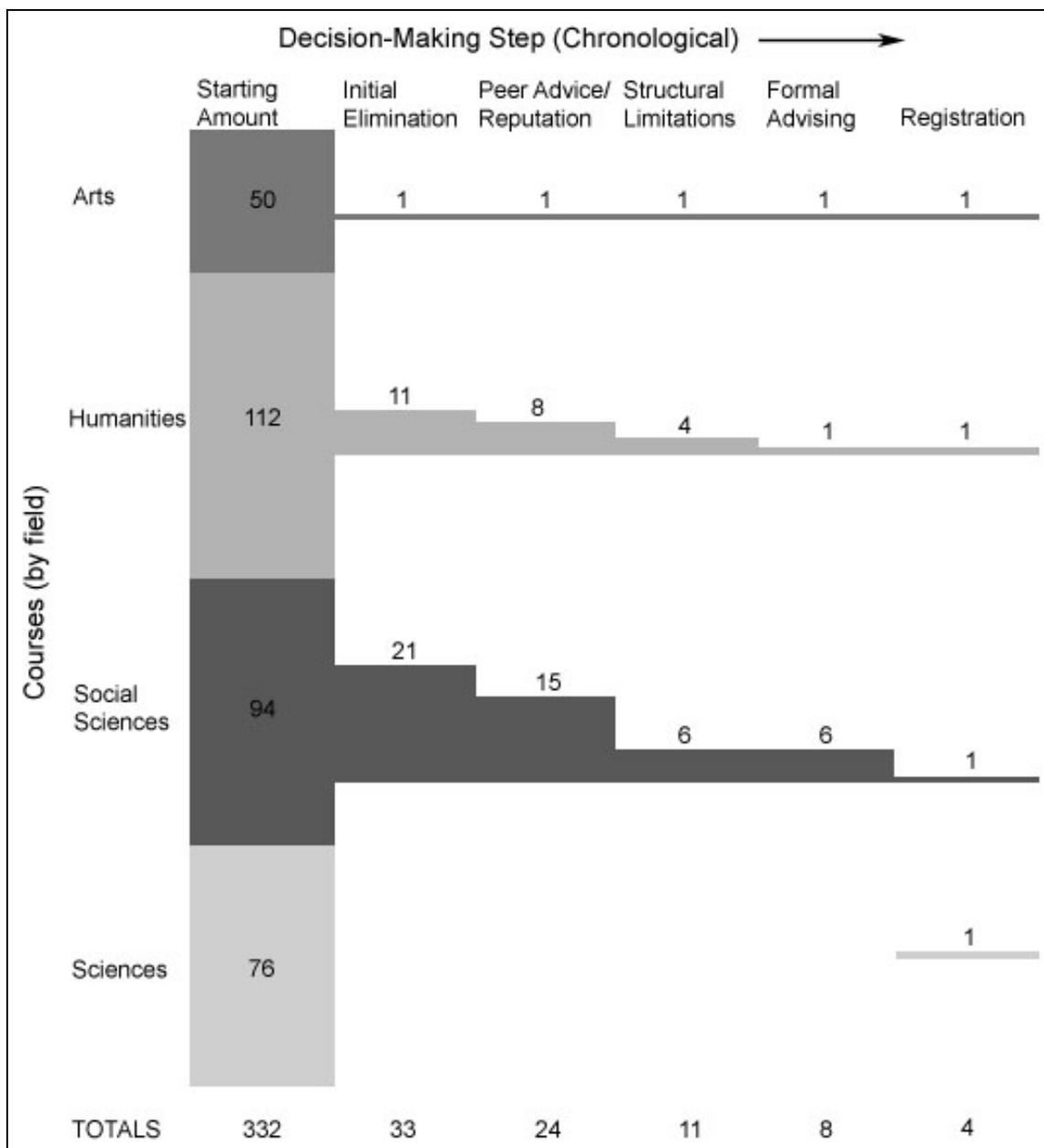


Diagram 1.1

Represented here is the course selection process of a single student accounting, chronologically, for the various “decisions” in the process, that shrink the spectrum of courses students can and/or are willing to register for. In this case, the student is primarily interested in social sciences and humanities, having immediately eliminated all science classes and all but one fine arts class (typical behavior for most “non-science” students).

Peer advice and the reputation of various classes allow the student to further reduce their choices to around 24. Confronting the structural limitations on their choices, the student sees they cannot take 13 of their 24 choices, and their meeting with their adviser leaves them with 8 choices to pick from when they register. The registration process allows the student three of the classes they initially wanted, but forced them into a science class they had no interest in.

Reference List

Academics: Advising at Hamilton. Retrieved April 4, 2007.

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