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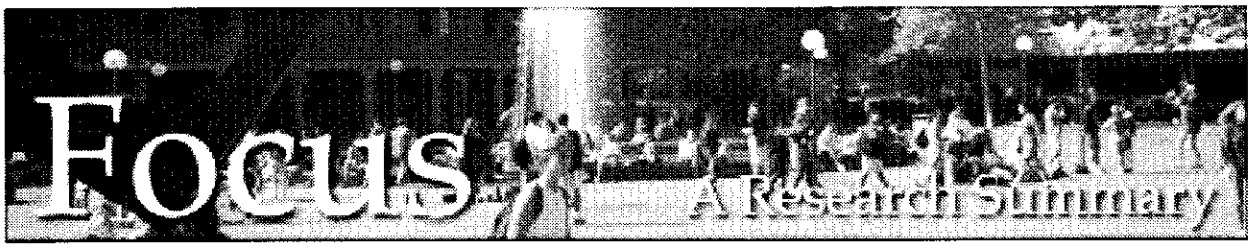

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Analysis of Freshmen Retention: Fall 1998 to Fall 1999

· Executive Summary ·

Prepared by Carl Simpson, Sharon Schmitz, Linda Clark, and Gary McKinney

Introduction

In fall of 1998, Western enrolled 2199 new freshmen; in the fall of 1999, 1725 of them returned, for a 78.4% retention rate. This study examines what influences freshman retention and also grade point average, the key indicator of academic adjustment and by far the most powerful predictor of retention. The orientation of this analysis, like all those performed by the Office of Institutional Research and Resource Planning, is toward policy. We seek to develop knowledge that may help Western serve its students and the public better—in this case by improving early academic adjustment and increasing retention.

All Western students are admitted because they show the promise to succeed. Some of those who encounter adjustment difficulties early or decide not to return may have learned that college is not the best alternative for them. For most, however, adjustment difficulties and non-retention reflect a failure on the student's part, or a failure of the institution to support the student as well as we might have, or both. Our analysis of what influences retention identifies many factors Western cannot change, such as students' high school academic achievement, but our primary goal is to identify factors Western has some ability to change, measured as early in students' experience as possible.

Summary

This copy of *Focus* summarizes the findings from a much longer technical report examining retention among native freshmen who entered Western in fall, 1998. (To obtain a copy of the whole report see the bottom of page six.) To increase our understanding of why students were or were not retained at Western, the study used data from Admissions and Registrar's files including course transcripts for all 1998 entering freshmen, a survey of 600 selected at random, and in-depth interviews with 32 who received low grades their first quarter.

A few withdrawals (14.4% or 3.1% of the freshman class) realized almost immediately that Western and/or college was not right for them and left during or after fall quarter. Most withdrawals, however, (62.2% or 13.4% of the freshman class) completed the academic year, then chose not to return. One factor was found to predict early withdrawal: living on versus off campus. Withdrawals who lived on campus were nearly twice as likely as those who lived off campus to complete the freshman year.

FRESHMEN RETENTION, FALL 1998 TO FALL 1999

College GPA is by far the most powerful influence on retention—at Western as well as in myriad studies of retention elsewhere. In particular, GPAs in the very low range have a huge impact. For example, among students whose first quarter GPA was below 1.5, only 40.7% remained at Western the next fall. Among students whose entire freshman year GPA was below 1.5, fewer than ten percent return. Each GPA increment from 2.0 up to 4.0 adds slightly to retention (from 78.8% for GPAs between 2.0 and 2.5 to 89.6% for those above 3.5). Each increment below 2.0, down to 0.0 subtracts a large amount from GPA (down to 9.4% retention for those who earned no passing credits freshman year). A few withdrawals were dismissed (12.9% of all withdrawals). While others made the choice to try some other option, many of them were on probation and at risk of dismissal.

INFLUENCES ON FALL GPA

Because GPA is so powerful a predictor of retention and also our best indicator of how successfully students engaged academically, we analyzed *what factors influence fall GPA and freshman year GPA.* High school GPA is overwhelmingly the most powerful predictor of college GPA, with SATs and advanced placement work adding to the explanation. Students' qualitative input confirms the quantitative findings. Many students who are performing poorly say they feel under-prepared and that academic expectations are higher than they had anticipated.

Western cannot improve retention by affecting students' academic preparation (except perhaps by becoming more selective). On the other hand, it may be possible to more fully engage students academically, thereby losing fewer to failure. One-fifth of Western freshmen earn first quarter GPAs below 2.0, and the first-quarter average GPA is 2.67—substantially lower than that of the University of Washington, which admits students with equivalent high school preparation. Beyond academic preparation, a variety of other factors exert at least some influence on first-quarter and freshman-year GPA, while others we tested had no impact.

- Greater early academic engagement leads to higher grades. Students who enroll for more courses earn higher grades. The few who say at least one "first choice" course was unavailable because of a conflict in which they assign higher priority to "work or other activity" earn much lower grades than others. Grades are also higher when the course serves as a requirement for the intended major, which we know from other studies engage students in a great deal more effort and interest.
- Social engagement, on the other hand, affects GPA and retention only when it becomes too great and distracts students from the academic side. Students who say their social transition to Western was "very easy" earn lower grades than others.
- Student who attend Summerstart orientation earn higher grades partially because they are on average more engaged and organized than those who do not, and partially because Summerstart students have much better course access.
- Also affecting GPA are factors indicating that the Western academic experience is congruent to students' expectations. For instance, some students enter Western anticipating smaller classes than the freshman year actually offers. Those who agree that "being in a small GUR discussion course would have improved my experience" received substantially lower grades than others. On the other hand, believing that informal contact with professors is good for learning is congruent with beliefs held by most professors and "officially" valued by Western. Students who agree that "I enjoy courses more when I know the professor" receive higher grades.
- The distribution of grades varies across courses and departments, so that freshmen GPAs are affected by which particular GUR departments and courses they enroll in. Those courses and departments are included in our analysis to prevent errors in inference, but not included in this summary because the particular courses that produce high or low grades could easily change in different years. It is interesting to note, however, that in this analysis of one freshman cohort, the departments with lowest GPA were not those generally reputed to be most difficult or most stereotypically perceived as emphasizing grading rigor. While most departments generated similar GPAs, some differed widely enough to have a substantial impact on students' fall GPAs. The percentage of freshman in each deparatment who receive fall grades of D, F or U ranges from 1.5% to 23.9%.

- The case of math is special because 22.0% of all student credit hours (SCH) taught during fall quarter are math courses. (English provides 10.2% of SCH; psychology, Languages, and History provide 6-8% of SCH each; and anthropology, chemistry, communication, and philosophy provide 4-6% each.) Freshmen who report that they needed more instruction and support in math earn lower GPAs; moreover, a disproportion of qualitative interview comments regarding perceived problems with instructors or problems mastering one subject were made in reference to math.
- Focusing more specifically on GUR courses, we find that only one math GUR, Math 102, accounts for a disproportion of low grades and course withdrawals. Further, different sections of Math 102 had very different success rates, not explained by student characteristics. Two other large GURs produced reliably different GPAs across sections, but in those cases, differences in students' academic preparation accounted for the differences in grades.
- Finally, when all other factors are controlled, two demographically defined groups had slightly different fall GPAs from others: 1) women earned slightly higher-than-expected grades, and 2) Asian-American students earned slightly lower-than-expected grades. Other differences among demographic groups were explained by differences in academic preparation.

INFLUENCES ON FRESHMAN-YEAR GPA

Because our survey of freshman adjustment was conducted in early winter quarter, some questions could not be applied to an explanation of fall GPA. The GPA could too easily have colored perceptions being reported after the fact. However, those measures can be used to predict winter and spring GPA. Findings that add new information to the patterns described above include:

- Student satisfaction with fall courses predicts their winter and spring GPAs, as well as being associated with fall GPA. We therefore interpret student satisfaction to indicate a general adaptation to and appreciation of the courses and instruction at Western. That is, it is another indicator of congruence and academic engagement.
- Students who report relatively easy fall academic transitions to Western and who report having relatively little difficulty understanding instructor's expectations earn higher grades.
- Students who entered more winter courses using add codes earn higher grades, which may indicate more satisfactory access to desired courses or may indicate greater adaptation to the demands of Western's academic system.
- Students who, in early winter, say that "registering for year-long sequences would have improved my experience" earn slightly lower winter and spring grades. This finding may point to issues of limited course access in winter or may indicate a desire for greater freshman year curricular coherence.
- Dropping a course in winter because it was too difficult or because of wanting fewer credits results in a substantially lower winter and spring GPA. Ironic on the face of it since the course was dropped to reduce pressures on GPA, this finding probably makes most sense as an early indicator of failing student engagement or confidence, which in turn results in lower grades.

In combination, all the factors mentioned above were able to explain nearly half of the variation in GPA (40.6% of fall GPA and 49.7% of freshman-year GPA).

INFLUENCES ON FRESHMAN-TO-SOPHOMORE RETENTION

All of the factors that influence freshman GPA also influence retention, indirectly, because GPA has such a large impact on retention. That is, each factor influences GPA, which in turn impacts retention. In addition, some factors have a direct impact on retention, after adjusting for effects of GPA—that is, an impact on retention over and above the indirect impact via GPA. The most prominent of these is advising, with congruence and course access also emerging in the analysis.

- The recognition of need for advisement seems to be one key to understanding retention. Those who say they felt no need for advising, in particular regarding choice of major, are less often retained. At the other extreme, among the modest number of students who say they needed, sought out and received assistance with personal issues, retention was exceptionally high—nearly 100%. During qualitative interviews, advising was also a prominent theme, although these student reports included not only the personal failure to seek it out, but also complaints regarding advising quality and, from others, praise for helpful advising that made the transition to Western easier.
- Feeling compatibility with Western instruction not only affects retention indirectly, through GPA, but also directly. Reporting that a small GUR discussion course would have improved the fall experience reduced later retention, and agreeing that GURs offer "valuable new ideas and insights" produced higher retention.
- One measure of fall quarter course access also predicts eventual retention: registering for three or more courses that were "all you could get" rather than desired courses is associated with lower retention. Students apparently can deal with fewer than three such courses, but three or more (for most, all the courses they took) appears to cross a line. This special case is relatively rare, and it may indicate a combination of several factors. First, we know that it never happens to students who attend Summerstart; one indirect effect of Summerstart on retention is therefore that it helps students avoid severe course access problems. Second, engagement and personal organization may be particularly low for students who find themselves in this situation. Third, having such a problematic beginning may sour the entire experience.

In all, the combined model including freshmen year GPA and all the factors listed above is able to explain one-third (.337) of variance in retention. GPA is overwhelmingly the most powerful predictor. Indeed, if we consider only those students who were not dismissed for academic failure, we are able to explain only half as much variance in retention (.167). And even among these students, GPA remains the most powerful predictor, accounting for well over half of the variance that is explained by the model. *In short, to understand non-retention at Western, one must above all understand the causes of students' academic failure, which explains more than three times as much variance in retention as all the other factors we were able to test.*

CORRESPONDENCE BETWEEN QUANTITATIVE AND QUALITATIVE FINDINGS

A small set of open-ended interviews with students who had low fall quarter GPAs confirm several findings from the quantitative analysis. Academic preparation is understood to be problematic, although many emphasize problems understanding professors' expectations and standards, and how they differ from those in high school. These students' emphasis on their difficulty understanding academic expectations may be interpreted as further evidence for the importance of sharing definitions and valuation of university education congruent with those of the faculty.

These interviews also confirm the importance of academic engagement versus social engagement, with many of these at-risk students enjoying a too-active social life and few feeling they had engaged fully with the academic life of Western. By way of explanation, students point both to personal choices and motivations, and also to instruction at Western, which many felt was too impersonal and distant. Reinforcing the importance of this issue, the one measure that our quantitative analysis showed to have both a significant direct effect on retention and also a significant indirect effect, through freshman year GPA, was the perception that the fall quarter experience would have been improved by having "a small GUR discussion course." Finally, qualitative interviews confirmed that issues of advising and course access played a central role in retention.

CONCLUSION & POLICY IMPLICATIONS

The focus of this report is to expand our understanding of success during the first year and of freshman retention. In addition, in this concluding section, we point to a few possible policy implications of these findings. These are suggestive only, since the analysis does not directly confirm best approaches to overcome the problems we identify—or even which determinants of retention should be considered problematic. (Some proportion of the students who leave are probably best served by doing so. However, we assume that others would be

better served if problems leading to their departure had been addressed, allowing them to remain enrolled.) We offer these policy implications in the spirit of stimulating discussion.

Academic performance, the most powerful influence on retention/withdrawal, presents a confusing issue for universities. Is poor academic performance entirely the student's responsibility? How well prepared are our students? What is a reasonable distribution of grades for the students we admit, given their preparation and level of engagement? How much is their relative lack of engagement the responsibility of the university? How much should Western offer by way of remediation, tutoring and advisement to support students who are performing badly? Where is the balance that retains high academic standards while also taking steps to engage students' best work and supporting students who are having temporary difficulties?

No analysis can answer such complex questions, but ours does confirm that little can address retention at Western that does not address questions of academic engagement and performance. Western is failing to engage many freshmen academically—especially those with weaker academic skills. Western gives failing grades to more students than UW, despite similar admissions. And Western's retention is falling. These findings suggest room for conversations about grading policies, the coherence of the freshman academic experience, how to increase students' academic engagement, how to communicate academic expectations more clearly, our level of support for weaker students, and proactive advising to contact and support less well prepared students.

One set of findings in particular recommend campus conversations among faculty regarding grading: grade distributions vary widely among GUR course and section. Among courses enrolling over 100, the range of course grade averages in fall 1998 varied from a low of 1.7 to a high of 3.4. While some variation in grading practices is natural and some differences are created by students' selection into different courses, it becomes a problem when a students' GPA is in large part determined by which course or section they happened to enroll in. Matters such as faculty grading practices should not become bureaucratized or rule-bound, but faculty discussion and collaboration is likely to result in more equitable treatment of our new students.

Western could also provide more by way of tutoring, especially in math, and more proactive advising, reaching out to students whose initial grades put them on track for withdrawal. We have anecdotal evidence that the Access program, which serves only a few students admitted with low Admissions Index scores, is highly effective. Recent moves toward more Internet-based advising may help, but we still face a problem of limited advising contact with freshmen.

Related to the question of academic performance is the issue of orienting students to Western's academic expectations and practices, and engaging students in the academic sector at Western. Freshmen are well integrated socially, but not academically. We know from other assessment research that most Western students do not really engage until they enter their majors, most in the junior year. Too many of our non-engaged freshmen are earning low grades and then deciding to leave Western. They are, if you will, potential late bloomers who nip themselves in the bud and therefore never get go bloom.

What can we do to increase engagement and to set expectations more accurately? One possibility is the curriculum itself. All levels of our research identify the value of a small, discussion-oriented GUR course as a key element of first quarter engagement. In particular, for those students not self-disciplined enough to engage when learning is primarily passive—as is often the case in large classes—the opportunity to interact and be drawn into an intrinsically meaningful academic experience (as opposed to routine high school requirements) may be a key to success at Western. One of students' primary reasons for choosing to attend Western is our size—in particular being similar in quality but much smaller than UW. And while Western's size appears to translate into social adjustment and comfort well enough, the same is not true for academic adjustment until students enter majors.

We also know from other assessment research that many freshmen do not see GURs as meaningful—as organized in ways that make sense for learners. Consequently, many students view GURs as a distraction—as preventing them from "making progress toward a degree" rather than as part of that progress. It is probable that a

more coherent GUR program would increase engagement. Also, growing out of that, advisors and faculty could more easily explain the reasons for GURs and assist students in making wise GUR choices.

We can also look to Summerstart and other advising to help set academic expectations. Although these are rather minor as interventions go, Western does have students' ears as they arrive here, and our Summerstart orientation is too brief to set academic expectations or even to address the issue of academic challenge and success. Yet the older "small-campus" Western where informal contact with faculty might suffice no longer exists, and something needs to replace it. Fall quarter GUR instructors could perhaps also be more attuned to issues of academic integration, but most such courses enroll many non-freshman students, and instructors must teach content and skill, not provide advising. That situation may recommend changing the GUR to include one or more freshman-only courses early in the freshman year.

Practices such as offering discussion seminars to all fall freshmen or proactive advising attempts to all students are expensive. If Western wishes to engage in them but cannot afford them for all, one possibility is to identify students whose high school academic profile predicts low performance or non-retention. Our analysis makes clear that any such projection would be far from fully accurate, but would have some predictive value. It also makes clear that the felt need for having at least one small class is especially high among those who earn low grades at Western.

This study noted one case where course access affected retention: for those students registering very late, who can find no courses they actually wanted, retention is significantly reduced. However, while course access remains an issue that affects student *satisfaction*, and while Western can continue to work on this issue (setting aside seats, etc.), it is less problematic than it used to be and is not a very strong driver of performance or retention.

The GUR math requirement is also a specific area of concern, both because Math 102 seems a problem for many students and also because at present the Math department has the wildly disproportionate load of providing one-fifth of total SCH for first-quarter freshmen. This issue intersects with issues of curricular reform, departmental instructional burdens, and student preparation. In this context, we therefore note only that math plays a rather central role in the adjustment to Western of new freshmen and unevenness in the instruction of Math 102 raises cause for concern.

Finally, one policy option is recommended by the simple mathematical reality that a very low first quarter GPA discourages later engagement because students face such a steep uphill climb to reach a cumulative GPA that removes them from probation. Western now has a very small "fresh start" program, which allows students returning after five years or longer to have their cumulative GPA exclude their earlier schooling. We should perhaps discuss whether something similar might be introduced for freshmen. Specifically, freshmen whose first quarter GPA is below some cutoff—perhaps 2.0 or perhaps lower—might be allowed the one-time-only option of restarting the calculations of GPA for purposes of academic standing and graduation, provided that they participate actively in a program of special advising and tutoring. Their first quarter grades could still be calculated into their cumulative GPAs for transcript purposes, but not for determining academic standing or graduation.

Such a program would recognize that academic qualifications and maturity are separate, and that, while students must be allowed to make mistakes and to take responsibility for them, some mistakes are too severe to learn and recoup from. It would also put in place an incentive for students who are performing poorly to engage in special advising and academic support. Tying a partial fresh start option to participation in an advising and tutoring program would add the infrastructure Western needs to focus effort on those most in need and most motivated to improve.

For a copy of the whole report, please contact Gary McKinney:
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Exhibit 1: Key Predictors of Retention, Western Fall 1998 Freshmen*

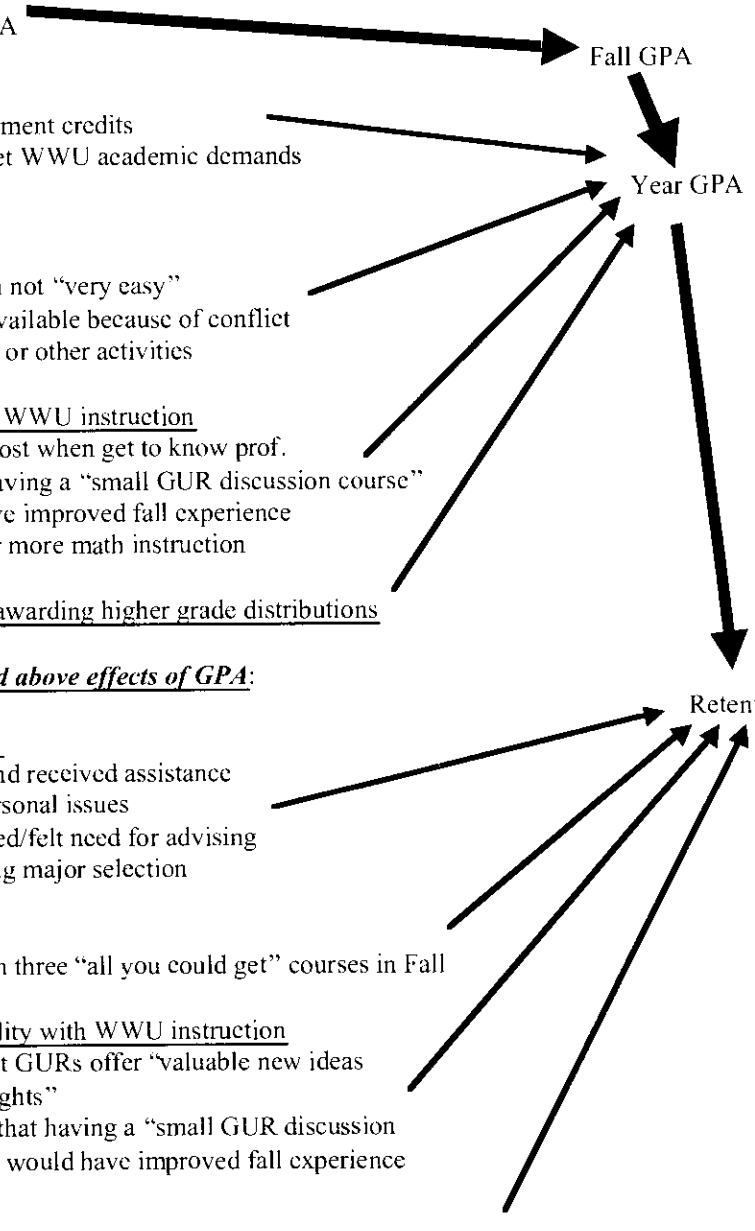
Indirect Effects, through GPA:

Academic preparation
- High school GPA
- SATs
- Advanced placement credits
- Feel able to meet WWU academic demands

Engagement
- Course load
- Social transition not "very easy"
- No courses unavailable because of conflict with work or other activities

Felt compatibility with WWU instruction
- Enjoy course most when get to know prof.
- Disagree that having a "small GUR discussion course" would have improved fall experience
- Felt no need for more math instruction

Enrollment in courses awarding higher grade distributions



Direct effects, over and above effects of GPA:

Advising issues
- Needed and received assistance with personal issues
- Recognized/felt need for advising regarding major selection

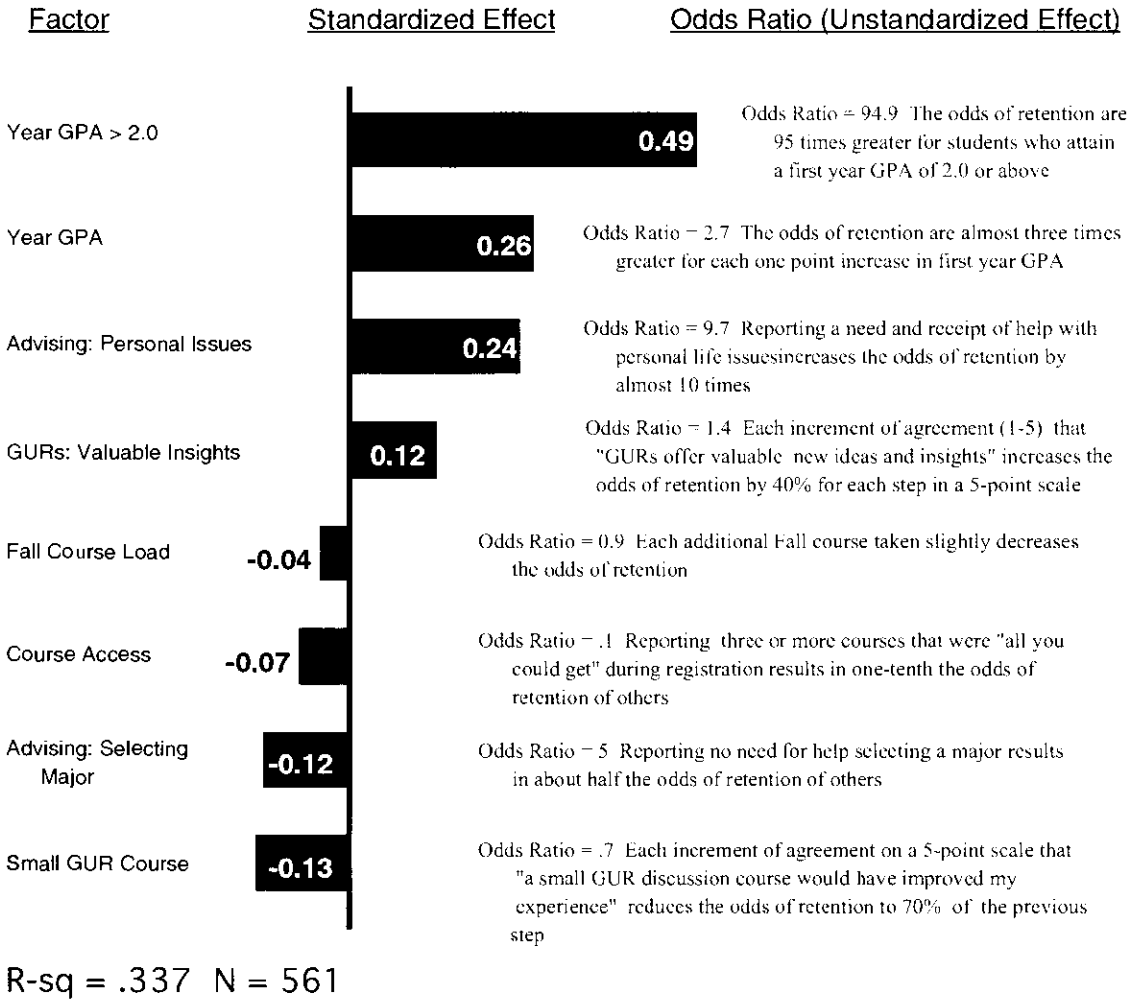
Course access
- fewer than three "all you could get" courses in Fall

Felt compatibility with WWU instruction
- Agree that GURs offer "valuable new ideas and insights"
- Disagree that having a "small GUR discussion course" would have improved fall experience

Engagement
- Participation in Summer 1999 and Winter 2000 surveys

* All predictors are worded so that their effect is to increase GPA or retention. Hence the odd wording in some cases.

Exhibit 2: Factors Influencing Retention (Combined Analysis)



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