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What Advising Files Tell Us about Students Who Leave General College?

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ABSTRACT

This study describes information contained in advising files about issues students encounter during their first two years of college, and the potential value of this information in understanding student leaving. Students who enrolled in a college program for underqualified students and who left before the end of their sophomore year were identified and 100 were chosen at random for file analysis. The analysis suggested that leavers in poor academic standing had more and different issues reported in their files than did leavers in good academic standing. This suggests a possible relationship between issues and different types of leaving or may be the result of higher self-disclosure within the poor academic standing group.

Retention and persistent low graduation rates have been a big concern for the University of Minnesota (UMN). To find out what may explain the problem of attrition, University researchers have conducted studies to identify types of leavers and factors associated with leaving such as ethnicity, academic preparation, academic achievement, interests/majors, access to courses and programs, and personal or non-personal issues (Matross & Huesman, 2001; Wambach, Hatfield, & Merabella, 2001; Wambach, Hatfield, Mayer, & Franko 2003; Wambach, Mayer, Hatfield, & Franko, 2003). Some of these studies have focused on UMN General College (GC) because GC students have a comparatively high rate of leaving. Former research found that 30% of GC students left within their first two years of study (Wambach, Franko, & Connor, 2005; Wambach & delMas, 1996). Because GC students have lower high school ranks and ACT test scores than students admitted to other UMN colleges, lack of academic preparation is likely to be a factor contributing to GC students' leaving. Prior studies have found that half of the GC leavers left for involuntary reasons including poor academic performance and financial holds (Matross & Huesman, 2001). However academic preparation does not explain why some GC students leave and others persist to degree completion. Wambach and colleagues (Wambach, Hatfield, et al., 2003; Wambach, Mayer, et al., 2003) used advising files to study the issues that may have been related to GC students' leaving, and found that lack of motivation, physical and mental health concerns, financial problems, and conflicts between family/cultural expectations and demands of college were indicated in the leavers' advising files.

However, a limitation to the above studies that used GC advisor files was the variation in quality of advisor notes. Most of the advisor notes were hand written, and

about half of the files had no notes available or contained little information (Wambach, Hatfield, et al., 2003). This study was designed to make use of electronic advisor files that were fully implemented since the former studies were completed. It was believed that electronic advisor files may contain more detailed information because it is a relatively easy way for advisors to write notes and copy information. In addition, although it has been found that half of the GC leavers left with a low GPA, it is unclear how their GPAs changed over time and what issues were associated with their poor academic performance. Moreover, since not all students leave in academic difficulty, this study investigates whether leavers who left in good academic standing are concerned about different issues, compared to those who left on academic probation or suspension.

The present study includes a general overview of persisters and leavers to explore how their term GPAs and enrollments change over time. Next, we describe the primary issues reported in leavers' advising files, issues associated with poor academic performance, and the relationship between the number of issues reported and frequency of advisor contacts. Specifically, this study was designed to answer the following questions:

1. What are the primary issues reported in leavers' electronic advisor files?
2. Are GC leavers who left under different academic standings concerned about different issues?
3. What issues are primarily associated with leavers' poor academic performance?
4. Do students with more issues reported tend to have more advisor contacts?

Last, this study examined leavers' plans to continue higher education after leaving the UMN.

## Method

### *Subjects*

The present study was conducted in two stages. The sample used during the first stage included all GC 2003 New High School (NHS) students (N= 894) who started their first semester in GC fall 2003. Among this sample, 616 students who enrolled in spring 2005 were considered persisters, while 278 students who did not enroll in spring 2005 were considered leavers. Data obtained from this sample were used to describe students' GPAs and enrollment changes over time. During the second stage, a sample of 100 leavers was randomly selected from the 278 leavers for advising file analysis. Among the 100 leavers, one leaver did not have an advising file, resulting in 99 advising files being available for analysis.

### *Materials and Procedure*

Information about all subjects' (N=894) enrollment, term and cumulative GPAs, pre-matriculation interest, financial and/or academic holds, and demographic data were obtained from UMN Data Warehouse. The Data Warehouse contains student information that is organized by subject area (e.g., admission, enrollment, and course data).

The advising files for the 100 randomly chosen leavers were printed out from the GC Student Database, and were coded by one of the authors. Each file was read three times. During the first two readings, the rater made notes on all the student issues reported and coded them into an Excel file. Then the rater looked for information indicating whether a student had considered leaving the UMN or what school he/she planned to attend after leaving. The rater also assessed the quality of files (have little,

enough, or thorough information) and the number of contacts between a student and his/her advisor.

In addition, another author reviewed the 100 leavers' transcripts to collect more information about the leavers' academic performance that included cumulative GPA and frequency of withdrawals. Frequency of withdrawals was measured by the total number of "W" grades on a student's transcript. For example, if a student had four Ws, he/she was counted as having four withdrawals.

Students' enrollment information at other institutions after leaving the UMN was obtained from the National Student Clearinghouse (NSC), a national source for post-secondary degree and enrollment verification. Through NCS Student Tracker service, a post-secondary institution can track former or prospective students' enrollment and degree records in other institutions nationwide.

### *Coding*

*Issues.* Issues indicated in advisor files were categorized into two dimensions, academic versus non-academic and student versus institution. Thus, four large groups of issues were formed: student academic issues, student non-academic issues, institutional academic issues, and institutional non-academic issues. In Table 1, the categories and subcategories that were used to code issues are listed. The issues associated with leaving GC were suggested by prior research (Wambach, Hatfield, et al., 2003; Wambach, Mayer, et al., 2003) but some changes were made in this study, such as specifying different types of academic issues (e.g., lack of academic skills, overwhelmed by coursework) and differentiating between physical and mental health issues.

Most of the issues are self-explanatory except for academic alerts and incongruities. In general, an “academic alert” is used by GC instructors to warn students who are behind in a class or are at risk to fail a class. However, as different instructors use it differently, this term has been used broadly, ranging from warning a student who missed his/her first class to suggesting a student withdraw because he/she is failing the class. In this study, academic alerts were coded only when the files indicated that the student was far behind in the class, was failing the class, or had excessive absences. The incongruities/resistances subcategory was created for the prior study to identify students who appeared to be unwilling to follow advice or institutional processes (Wambach, Hatfield, et al., 2003). This study adapted this concept and coded cases in this subcategory if students were reported not to follow advice, to change registration plans without advisors’ permission, or to appear overconfident when advisors warned them about their risk of failing a class.

Most of the subcategories were not used in a mutually exclusive manner. A student may have multiple issues reported in his/her file and some of the issues may relate to each other such as work and financial issues or family and emotional issues. However, if the same issue was reported more than once in a student’s file, this issue was only coded once for the student.

Table 1  
*Issues That Are Associated with Leaving College*

<p><b>Student Academic issues</b></p> <ul style="list-style-type: none"> <li>• Academic alert (e.g., failing one or more classes, excessive absence)</li> <li>• Poor performance (GPA&lt;2.0, probation, suspension)</li> <li>• Average performance but not high enough for transfer requirements</li> <li>• Lack of academic skills (e.g., math skills, time management)</li> <li>• Overwhelmed by course work</li> <li>• Low motivation/lack of effort</li> <li>• Major undecided/having difficulty deciding major</li> </ul>	<p><b>Student Non-Academic Issues</b></p> <ul style="list-style-type: none"> <li>• Physical health issues (including pregnancy)</li> <li>• Emotional/Mental health issues (e.g., substance abuse, depression, family/relationship issues affecting concentration on school)</li> <li>• Disability issues (lecture delivery issues, problems getting to class, special aids in lab)</li> <li>• Financial issues (tuition issue, FA suspension)</li> <li>• Work issues (work too long, conflict with study)</li> <li>• Family issues</li> <li>• College adjustment issues (e.g., isolation, no connection with campus, having difficulty adjusting to UMN systems)</li> <li>• Legal issues</li> <li>• Incongruities/resistances/over confidence</li> <li>• Personal reasons (need time off, military, moving)</li> </ul>
<p><b>Institutional Academic Issues</b></p> <ul style="list-style-type: none"> <li>• Major/vocational training not available at the UMN (less desirable than alternatives available elsewhere)</li> <li>• Unsatisfied with GC or UMN because of registration, coursework, instructors, stigma or other academic related issues.</li> </ul>	<p><b>Institutional Non-Academic Issues</b></p> <ul style="list-style-type: none"> <li>• UMN not a good fit for non-academic reasons (too big, far away from home, transportation/parking)</li> </ul>
<p><b>•Other Issues</b></p>	<p><b>• No issues reported</b></p>

*Quality of advisor notes.* Previous studies that used advisor files as a data source have found considerable variability in the amount of information included in advisor notes (Wambach, Hatfield, et al., 2003; Wambach, Mayer, et al., 2003 ). To capture the variation, the current study used a 4-point numeric scale based on one developed by Wambach, Hatfield, et al. (2003). They defined “quality as the amount of unique information” (p 3) included in an advisor file. Files were ranked on the scale of 1 to 4; the higher the rating, the more information in a file (see Table 2). The higher rating also



indicated the extent to which the advisor file contained information beyond the documentation of registration plans, academic alerts, mid-semester review (MSR), and probation or financial holds.

Table 2  
*Coding for Quality of Advisor Files*

Rating Category	Category Description
1	No notes exist for the student
2	Little information contained in the file to understand the student
3	Enough (standardized) information contained in the file to understand the student
4	Comprehensive information contained in the file to understand the student

*Advisor contact.* The frequency of contacts documented in advisor files, including the total number of contacts and the number of contacts during a student's first year, were counted. A contact was defined as any form of information delivery or exchange (e.g., appointment, phone call, email) between either an advisor and a student, or an advisor and a faculty member, or any notes that advisors documented in a student's file. The contacts were counted in two ways. One was the total number of contacts (Total Contacts), which included all the records of contacts documented in a file. The other, called student initiated contacts (SI Contacts), only included contacts that a student initiated or were in response to an advisor contact.

Past studies have shown some evidence that GC students who were interested in pursuing a major in science, technology, engineering or math fields (STEM) were more likely to leave than students who showed interest in other majors (Wambach, et al., 2003a; Jansen, Wambach, & Franko, 2005). To explore if academic interests were associated with leaving for the GC 2003 NHS cohort, students' pre-matriculation interests were categorized into STEM and non-STEM majors. STEM majors included pre

IT, pre biological science, pre medicine/health science, and pre computer science. Other pre-matriculation interests (e.g., humanities, social science, and education) were coded as non-STEM majors.

In addition, to explore if issues related differently to different types of leavers, the sample of 100 leavers were categorized into two groups based on their academic standing when they left. Leavers whose cumulative GPA was equal to or greater than 2.0 were categorized into the good academic standing group, while those who had a GPA below 2.0 were categorized into the probation and suspension group. Academic standing was also used to compare probabilities of enrollment, in which all 2003 NHS students were categorized into three groups: good academic standing, probation, and suspension.

## Results

### *Part I Description of Leavers and Persisters*

*Demographic Information.* Among the 894 NHS students who first enrolled in fall 2003, 616 (68.9%) were persisters and 278 (31.1%) were leavers who did not enroll in spring 2005, the fourth semester after their initial enrollment. Descriptive information about leavers and persisters is included in Table 3.

Table 3  
*Descriptive Statistics for the Samples (N=894)*

		Leavers (n=278)		Persisters (n=616)		Total 2003 NHS (N=894)	
		n	%	n	%	n	%
Gender	Male	134	48.2	269	43.7	403	45.1
	Female	143	51.4	339	55.0	482	53.9
	Unknown	3	.4	6	1.0	9	1.0
Ethnicity	White	134	48.2	282	45.8	416	46.5
	African Am.	56	20.1	130	21.1	186	20.8
	Asian	67	24.1	135	21.9	202	22.6
	Hispanic	7	2.5	33	5.4	40	4.5
	Native Am.	7	2.5	13	2.1	20	2.2
	Unknown	7	2.5	23	3.7	30	3.4
Pre-Matriculation Interests	STEM	34	12.2	67	10.9	101	11.3
	Non-STEM	187	67.3	427	69.3	614	68.7
	Undecided	57	20.5	122	19.8	179	20.0
Academic or Financial Hold	Probation	116	41.7	162	26.3	278	31.1
	Suspension	67	24.1	2	.3	69	7.7
	AU	109	39.2	153	24.8	262	29.3

Note: AU= Financial hold, Am.=American

From Table 3, leavers and persisters did not seem very different in proportions of gender and ethnicity. Chi-square tests on gender [ $\chi^2(1, N = 885) = 1.31, p = .25$ ] and ethnicity [ $\chi^2(4, N = 864) = 4.28, p = .37$ ] showed no significant differences between leavers and persisters, indicating that leaving and persistence were not related to gender and ethnicity. However, leavers and persisters had significant differences in frequency of academic [ $\chi^2(1, N = 894) = 203.08, p < .001$ ] and financial holds [ $\chi^2(1, N = 894) = 19.10, p < .001$ ]. Leavers had more records of probation, suspension, and financial holds than persisters did. Table 3 shows that 41.7% of leavers had probation records and 24.1% had suspension records, while the proportions for persisters were 26.3% and .3%. The two groups were also different in the proportion of financial holds; 39.2% of leavers had financial hold records while the proportion for persisters was 24.8%.

A Chi-square test was also conducted to examine whether leavers and persisters had different pre-matriculation interests. The result indicated no difference between leavers and persisters based on their interest in STEM and non-STEM majors,  $\chi^2(1, N = 715) = .418, p = .52$ , although overall more students were interested in non-STEM majors than STEM majors (see Table 3).

*GPA Changes Over Time.* The above results showed that among the 278 leavers, 65.8% left on probation or suspension, which was consistent with Matross and Huesman's (2001) finding that many of the GC leavers left for academic reasons. This result suggests that poor academic performance plays an important role in students' decisions to leave GC. To explore how students' GPAs change over time, and whether the trend of change is different for leavers and persisters, means of term GPAs were plotted for 278 leavers and 616 persisters (see Figure 1). Means of term GPAs were also graphed for different groups of leavers (good standing, probation, and suspension) to compare the trends of change (see Figure 2).

Figure 1 Mean Growth Curves of Term GPAs Among Leavers and Persisters (N=894)

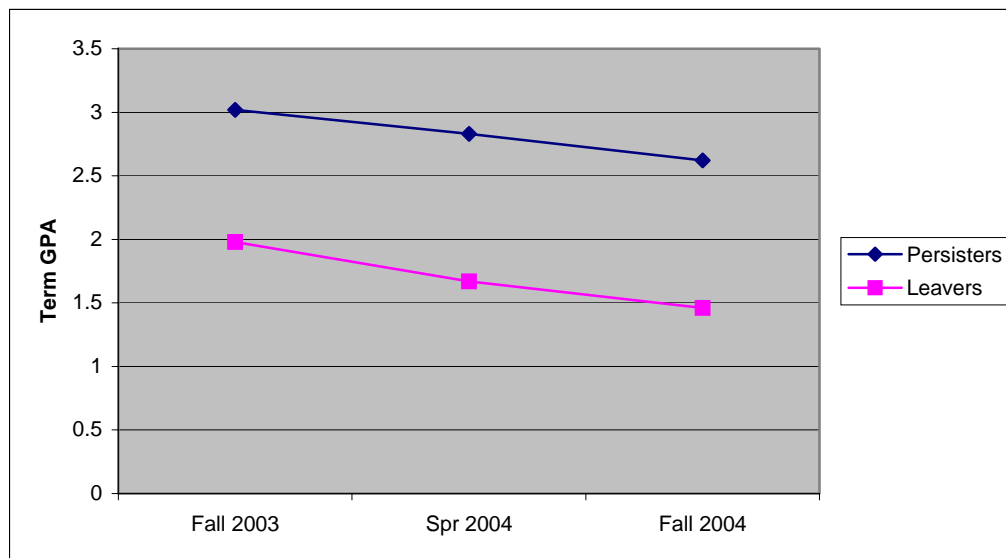
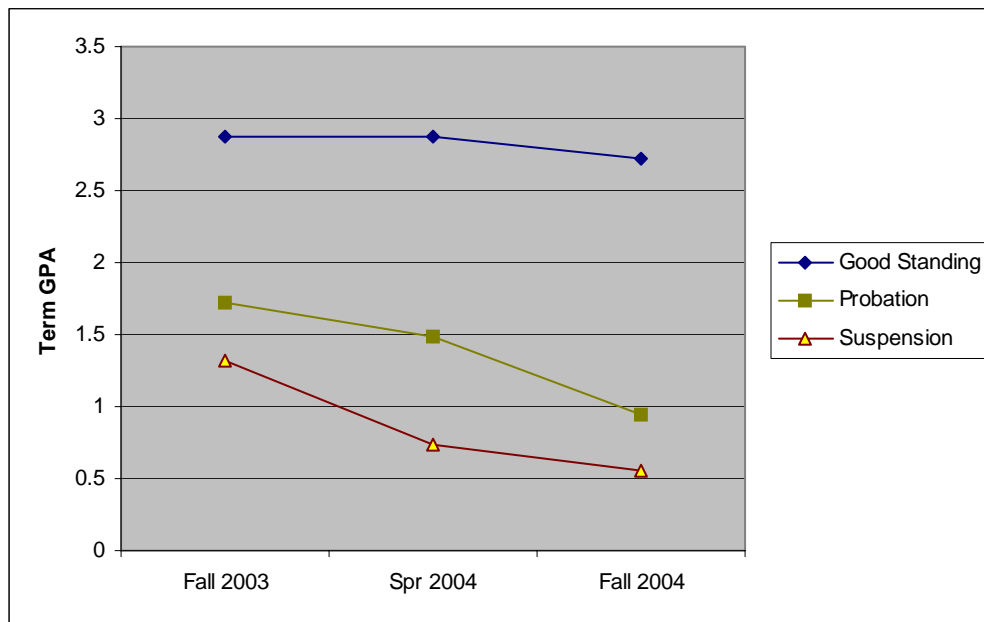


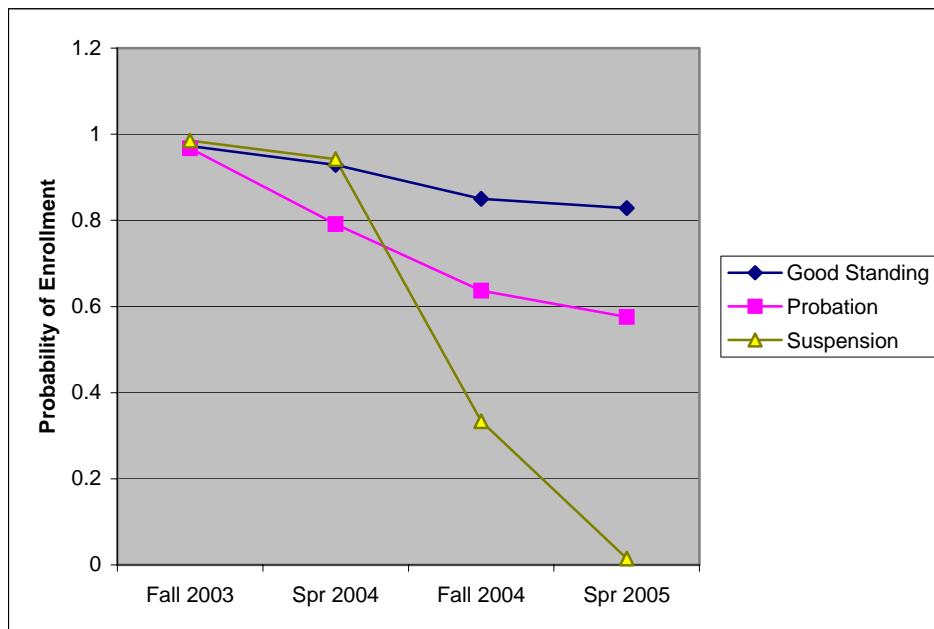
Figure 1 shows that at the first semester, fall 2003, GPAs already differentiated between the leavers and persisters, and then the differentiation continued during the 2<sup>nd</sup> and 3<sup>rd</sup> semesters. The differences in term GPAs between persisters and leavers remained stable from the first to the third semester, and the average GPA difference over time between these two groups was approximately 1.13 points. The change of term GPA over time for different leavers is presented in Figure 2. It shows that leavers in different academic standings had different mean GPA growth curves. Those who left in good academic standing had relatively high and stable GPAs over time, while the probation and suspension group had poor academic performance in the first semester, and then their term GPAs went down further in subsequent semesters.

*Figure 2* Mean Growth Curves of Term GPA Among Leavers (n=278)



*Probability of enrollment.* Enrollment change was graphed to examine the probability for a student to enroll term by term. Figure 3 presents the probabilities of enrollment for all 2003 NHS students who fell into each of the academic standing categories. It shows that the probabilities of enrollment for each group tended to go down over time, but starting the second semester, the good-standing group was more likely to enroll than the probation group. It also indicated that at the second semester, those who finally were suspended were more likely to enroll than those who were on probation. The continuous enrollment without improvement of academic performance during the second semester may result in suspension, and thus starting the third semester, the probability of enrollment for this group dropped down quickly.

*Figure 3* Probabilities of Enrollment for Students under Different Academic Standings (N=894)



*Part II: Issues reported in advisor files*

*Description of the sample.* One hundred leavers were randomly selected for advising file analysis, and one of them did not have advisor notes. Table 4 presents the gender and ethnicity information for this sample. The proportions of male, female, and four ethnic groups were comparable to the proportions of total leavers in the 2003 NHS cohort (see Table 3)

Table 4  
*Demographic information of the sample for advising file analysis (N=99)*

	Gender			Ethnicity					
	Male	Female	Unknown	White	African American	Asian	Hispanic	Native American	Unknown
n	47	51	1	44	20	27	4	1	3
%	47.5	51.5	1.0	44.4	20.2	27.3	4.0	1.0	3.0

*Description of issues.* Among the 99 leavers whose advisor notes were available, 86 had one or more issues reported in his/her file while 13 leavers had no issues reported. The number of issues reported for each leaver ranged from 0 to 7, and on average each leaver had 2.6 issues. The standard deviation was 1.84, indicating a relatively large difference in number of issues reported for each leaver. Table 5 presents the frequency distribution of issues for leavers, showing that most of the leavers had one to three issues reported.

Table 5  
*Frequency Distribution of Leavers by Number of Issues (N = 99)*

	Number of issues reported for each leaver								Total
	0	1	2	3	4	5	6	7	
Number of leavers	13	15	27	18	11	5	7	3	99

The majority of issues reported were student academic issues (56.5%), among which academic alerts and poor academic performance were reported most frequently (see Table 6). A large proportion (35.9%) of the issues were in the student nonacademic category, among which family, work, financial, and emotional/mental health issues were reported most often. Compared to student issues, institutional issues were reported less often (7.6%), but the presence of institutional issues may directly relate to leaving. A Chi-square test indicated a significant relationship between report of institutional issues and leavers' plan to enroll in another school,  $\chi^2(1, N = 99) = 9.75, p = .002$ . Nine of the 15 leavers (60%) who had institutional issues indicated plans to enroll in another institution, while 18 of the 84 leavers (21.4%) without institutional issues had plans to enroll in another institution.



Table 6  
*Issues Reported in Advisor Files for Leavers (N=99)*

Categories	Issues	Frequency of issues	Frequency of issues in category	Percent of issues in category
Student Academic Issues	Academic alert	66	134	56.5
	Poor performance	34		
	Performance not high enough for transfer requirements	2		
	Lack of general study skills	8		
	Overwhelmed	9		
	Low motivation	10		
	Having difficulty deciding major	5		
Student Non-Academic Issues	Physical issues	6	85	35.9
	Emotional/Mental health issues	11		
	Disability issues	5		
	Financial issues	14		
	Work issues	14		
	Family issues	15		
	College adjustment issues	4		
	Legal issues	2		
	Incongruities	8		
	Personal reason (moving, military, need time off)	6		
Institutional Academic Issues	Training not available	5	11	4.6
	Unsatisfied with the program	6		
Institutional Non-Academic Issues	UMN not good fit	7	7	3.0
Total		237	237	100%

*Differences in issues among different leavers.* Leavers were categorized into two groups based on their academic standing upon exit. Among the 99 leavers, 43 left in good

standing (including six leavers with no GPA), and 56 left either on probation or suspension. It was found that most of the leavers had issues reported in advisor files. The combined probation and suspension group had a relatively higher rate of students (94.6%) with issues reported than the good academic standing group (76.7%) (Table 7).

Table 7  
*Frequency of Leavers by Issues Reported and Not Reported (N = 99)*

	Good Standing		Probation & Suspension		Total	
	n	%	n	%	n	%
No issues reported	10	23.3	3	5.4	13	13.1
Issues reported	33	76.7	53	94.6	86	86.9
Total	43	100	56	100	99	100

Four t-tests were conducted to examine the differences in four categories of issues between leavers in good standing and leavers in poor standing. Those who left in poor academic standing had more academic issues than those who left in good standing  $t(97) = -5.07, p < .001$ . On average, leavers in good standing had approximately one academic issue (Mean = .91,  $SD = .98$ ) reported, while those who were on probation or suspension had two academic issues reported (Mean = 2.00,  $SD = 1.12$ ). However, there was no significant difference in the frequency of student non-academic issues [ $t(97) = -1.60, p = .11$ ], institutional academic issues, [ $t(97) = .73, p = .47$ ], and institutional non-academic issues [ $t(97) = .35, p = .72$ ] reported for the two groups of leavers.

To examine whether leavers who left under different academic standings had different issues reported, 20 Chi-square tests were conducted for the individual issues. Given the large number of Chi-square tests, familywise  $\alpha$  (the probability of making one or more type I errors in a family of comparisons or significant tests) was set at .10 instead of .05 to control the Type I error without making the criterion too strict for each

individual test. It was found that the good standing group and the combined probation and suspension group had significant differences in the frequency of academic alerts and poor academic performance issues reported (Table 8). Leavers who left on probation and suspension had more academic alerts and poor performance issues reported in their advising files than leavers who left in good academic standing. The results also indicated that the two groups may differ in the frequency of four other issues (low motivation, emotional/mental health issues, family issues, and personal reasons for leaving), although these issues were not found to be statistically significant when setting a relatively strict individual Type I error ( $\alpha = .10/20 = .005$ ). Table 8 shows that the leavers on probation and suspension had a relatively higher frequency of low motivation, emotional/mental health issues, and family issues reported than leavers who left under good standing. However, the good standing group seemed more likely to leave for personal reasons (e.g., military, moving, need time off) than the poor academic performance group.

Table 8  
*Issues Reported for Two Groups of Leavers (N=99)*

Categories	Issues	Good Standing (n <sub>1</sub> = 43) <sup>a</sup>		Probation & Suspension (n <sub>2</sub> = 56) <sup>b</sup>		$\chi^2$
		n	% of n <sub>1</sub>	n	% of n <sub>2</sub>	
Student Academic Issues	Academic alert	22	50.0	44	78.6	8.96**
	Poor performance	3	6.8	31	55.4	15.34**
	Performance not high enough for transfer	2	4.5	0	.0	2.60
	Lack of academic skills	2	4.5	6	10.7	1.27
	Overwhelmed	2	4.5	7	12.5	1.90
	Low motivation	1	2.3	9	16.1	5.21*
	Having difficulty deciding major	3	6.8	2	3.6	.55
Student Non-Academic Issues	Physical issues	4	9.1	2	3.6	1.33
	Emotional/Mental health issues	1	2.3	10	17.8	6.11*
	Disability issues	2	4.5	3	5.4	.03
	Financial issues	5	11.4	9	16.1	.45
	Work issues	5	11.4	9	16.1	.45
	Family issues	3	4.5	12	21.4	4.12*
	College adjustment issues	0	.0	4	7.2	3.27
	Legal issues	2	4.5	0	.0	2.60
	Incongruities	1	2.3	6	10.7	2.69
	Personal reason	6	13.6	0	.0	8.12*
Institutional Academic Issues	Training not available	3	6.8	2	3.6	.55
	Unsatisfied with the program	3	6.8	2	3.6	.55
Insti. Non-Aca. Issues	UMN not good fit	4	9.1	3	5.4	.53

Note. a, b = Sample size: Good standing group n<sub>1</sub> = 43, Probation & suspension n<sub>2</sub> = 56.  
 \*\* p<.005 \* p<.05 but greater than .005 (Setting  $\alpha = .10/20 = .005$ )

Moreover, a preliminary examination indicated that leavers on probation and leavers on suspension may be different in the frequency of emotional/mental health issues. This did not appear to be true for other issues. Thus, a further Chi-square test was

conducted to examine the difference in emotional/mental health issues between three groups of leavers: good standing, probation, and suspension. The Chi-square result was significant,  $\chi^2(2, N = 99) = 15.34, p < .001$ , indicating that emotional/mental health issues reported in advising files were associated with leavers' academic standing. Specifically, more suspended leavers (8 of 25, 32.0%) had emotional/mental health issues reported than leavers on probation (2 of 31, 6.4%) and in good academic standing (1 of 43, 2.3%).

Chi-square tests were also conducted to explore if there were gender and ethnicity differences in work issues, financial issues, family issues, and emotional/mental health issues. As stated earlier, to control the inflation of Type I error but not to make the criterion for individual test too strict, familywise  $\alpha$  was set at .10 and the  $\alpha$  per test was  $.10/8 = .012$ . The results indicated that female leavers may have more work issues reported than male leavers, but the difference was not statistically significant when  $\alpha$  per test was set at .012,  $\chi^2(1, N = 99) = 4.78, p = .03$ . There was also some evidence that the Asian group had relatively more leavers with family issues reported (9 of 28) than White (4 of 44), African American (2 of 20), and Hispanic (0 of 4) groups, but the difference was not statistically significant,  $\chi^2(4, N = 96) = 8.70, p = .07$ .

*Relationship between frequency of withdrawals and student issues.* Total frequency of withdrawals was used as an additional way to measure a student's academic performance. To explore what issues may relate to students' withdrawal, preliminary correlations were conducted. Among the 99 leavers, frequency of withdrawals was significantly correlated with academic alerts ( $r = .24, p < .05$ ), work issues ( $r = .33, p < .01$ ), and family issues ( $r = .25, p < .05$ ). A significant correlation was also found between the frequency of withdrawals and the total number of issues reported for each student ( $r = .38,$

$p < .01$ ). To examine whether these four variables were predictive of withdrawal, a regression analysis was conducted. The results indicated that, overall, the regression model was significant ( $F_{(4,94)} = 6.28, p < .001$ ). Together, the four variables explained 21% of the variance in withdrawals ( $R^2 = .21$ ). The results also indicated that work issues were significantly predictive of withdrawals (Table 9).

Table 9  
*Regression Results: Frequency of Withdrawals as Response Variable (N=99)*

Variables	B	SE B	$\beta$
Academic Alert	.21	.42	.06
Work Issues	1.16	.47	.24*
Family Issues	.58	.47	.12
Total number of Student Issues	.21	.12	.22

\*  $p < .05$

### *Part III: Advisor Contacts and Student Issues*

*Quality of advisor notes.* When assessing the 99 advisor files, 38% were rated as 4, containing comprehensive information to understand the student; 51% were rated as 3, most of which contained enough standardized information such as contacts for registration, MSR reports, academic alerts, contacts for withdrawals, release of holds, or financial aid issues. Ten percent of the files had only one or two records and each record contained little information, and therefore were rated as 2. One student's file was not available, resulting in a rating of 1.

*Frequencies of advisor contacts.* As stated earlier, two types of advisor contacts were coded. One counted the contacts that students initiated or responded to their advisor (SI Contacts), and the other included any record of contact noted in advisor files (Total Contacts). On average, each leaver had 12.32 Total Contacts, of which 9.59 occurred during their first year. The average number of SI Contacts during the leavers' first year

was 5.52. There were significant differences in frequency of first-year Total Contacts [ $t_{(97)} = -2.23, p = .03$ ] and first-year SI Contacts [ $t_{(97)} = -2.04, p = .04$ ] between leavers in good standing and leavers on probation or suspension. Leavers in good academic standing had fewer advisor contacts than leavers on probation or suspension. The good standing group on average had 7.40 Total Contacts ( $SD = 7.15$ ) and 4.60 SI Contacts ( $SD = 2.80$ ) during their first year, while the probation and suspension group had 11.27 Total Contacts ( $SD = 9.50$ ) and 6.21 SI Contacts ( $SD = 4.54$ ) on average. The standard deviations indicated that large discrepancies in frequency of contacts may exist among individual leavers. In addition, there were no gender and ethnicity differences found in numbers of advisor contacts.

*Association between frequency of issues and frequency of advisor contacts.* There were significant correlations between the numbers of issues reported for a leaver and his/her frequency of advisor contacts. Table 10 presents the correlation matrix for frequencies of total issues, student academic issues, non-academic issues, and two types of advisor contacts, indicating positive associations between numbers of issues reported for leavers and their advisor contacts.

Table 10

*Correlations Between Frequency of Issues and Frequency of Advisor Contacts (N=99)*

	Total Issues Reported	Student Academic Issues	Student Non Academic Issues	Total Contacts	SI Contacts
Total Issues Reported	1.00				
Student Academic Issues	.84**	1.00			
Student Non Academic Issues	.74**	.33**	1.00		
Total Contacts	.49**	.43**	.42**	1.00	
SI Contacts	.45**	.37**	.39**	.86**	1.00

\*\*  $p < .001$ *Part IV: Leavers' plans to continue higher education after leaving*

The advisor files indicated that among the 99 leavers, 27 intended to enroll at another school. To find out the number of leavers who enrolled in other institutions after they left the UMN, an enrollment search was conducted by using the National Student Clearinghouse (NCS). As a result, 44 of the 99 leavers (44.4%) were found to have records of enrollment in another institution. Among the 27 who indicated intention to go to another school, 17 (63.0%) were found to have enrollment records. Another search was conducted for the 278 leavers, and found that 110 leavers (39.6%) had records of enrollment at another institution after they left the UMN.

## Discussion

The present study used information from the UMN data warehouse and advising files to describe GC leavers and persisters' academic performance, term by term enrollment changes, the primary issues reported in leavers' advising files, issues associated with poor academic performance, and the relationship between the number of



issues reported and frequency of advisor contacts. This study also examined leavers' plans to enroll in another institution after leaving the UMN.

*GPA and probability of enrollment.* The analysis of students' academic records found that from the first to third semester, on average, both persisters and leavers' term GPAs went down gradually, but leavers' term GPAs were consistently about 1.13 points lower than the persisters' GPAs. This is consistent with prior research on GC students (Wambach, Franko, & Connor, 2005). Among leavers, those who left on probation and who were suspended had poor academic performances starting their first semester. Compared to the probation group, the suspension group had even lower first term GPAs.

The study found that the probability of enrollment decreased over time and the rate of decrease was different among the three academic groups. By the fourth semester, the probability of enrollment for the good academic standing group was above .8 and for the probation group was approximately .6. The suspension group was likely to be suspended after the second semester. Another interesting result is that for this 2003 cohort, the suspension group showed a higher probability of enrollment than the probation group during the second semester, spring 2004. However, the continuous enrollment without improvement of academic performance during the second semester may result in suspension, and thus starting the third semester, the probability of enrollment for this group dropped down quickly. In addition, the results indicate that the probability of enrollment did not change linearly over time. It dropped quickly from the second semester to the third semester. Starting with the third semester the probability of enrollment began a more gradual decline. This result is consistent with GC institutional reports that most of the leavers depart after the second semester, and over half of the

students who leave are on probation or have been suspended. Therefore, during the second semester, advisors may need to closely monitor the performance of students on probation and seek to identify and address issues related to poor performance.

*Student Issues.* It was found that two-thirds of the leavers' files contained academic alerts and one-third noted poor academic performance. It was also found that the majority (65.8%) of the leavers were either on probation or had been suspended, indicating that poor academic performance most likely plays an important role in students' decisions to leave GC. This result is consistent with previous studies (Wambach, Hatfield, et al., 2003; Matross & Huesman, 2001). However, compared to the real number of leavers who were on probation or had been suspended (56 of the 99 leavers), there seemed to be a lower frequency of poor academic performance issues reported in advising files. It was found that only about half of the leavers who were on probation or suspension had poor academic performance issues reported in advising files. In addition, only 8 files documented academic skill problems suggesting that advisors were cautious or did not attribute students' academic problems to deficits in academic preparation or the inability to do college-level work.

Work, financial, family, and emotional/mental health issues were the primary non-academic issues presented in advisor files. Institutional issues were reported infrequently. Among the total number of issues reported (n=238), 7.6% were institutional academic and non-academic issues (e.g., majors not available, complaints about teaching styles, and environment). However, it was found that leavers who reported institutional issues were more likely to indicate intent to transfer to another institution. Also, some

students whose files did not indicate intent to transfer did enroll in another institution suggesting that institutional issues may have been underreported in the advising files.

This study also found that student issues differentiated among leavers who left under different academic standings. Leavers who left on probation and suspension had more academic alerts and poor performance issues reported than those who left in good academic standing. The later group had more personal reasons (e.g., moving, military, need time off) for leaving recorded in their advisor files. It is understandable that leavers on probation and suspension would have more academic problems reported in their files than leavers with good standing. However, to explain what may contribute to a student's poor academic performance, issues other than academic alerts should be considered. Results indicated that leavers in poor academic standing had relatively higher frequencies of low motivation and family issues reported than leavers in good standing, although the difference was not statistically significant with a strict Type I error.

Emotional/mental health issues were more frequently noted in the files of leavers on suspension. Eight of the eleven students with emotional/mental health issues reported were suspended leavers, suggesting that emotional/mental health issues may play a role in some students' poor academic performance. Emotional issues may interfere with a student's ability to concentrate on school, and thus result in poor academic performance. It is also possible that poor academic performance leads to emotional/mental health issues for some students. Also, the GC advising structure requires students on probation to meet regularly with their advisors, providing more opportunities to discuss personal and emotional issues with their advisors. Another explanation is that students who are at risk for suspension may be more likely to report emotional or personal issues as reasons for

their poor academic performance. Future studies could unpack this further by examining frequency and/or level of emotional issues in a more systemic fashion.

Another issue that may affect students' academic performance is work. It was found that the frequency of withdrawals was significantly related to work issues. Students who work, especially work long hours, are likely to feel overwhelmed, to have less time to study, or have time conflicts between school and work. While withdrawal resolves the immediate conflict, it increases the cost of the student's education and time to degree.

*Quality of advisor notes.* This study found that compared to hand written notes (Wambach, Hatfield, et al, 2003; Wambach, Mayer, et al., 2003), electronic notes were more informative. There were fewer electronic than paper files that contained no notes or notes with little information. However, we also found that the majority of the electronic notes only contained standardized academic information (e.g., registration plans, academic alerts, contacts for withdrawals) rather than thorough information to understand a student. The amount of detail an advisor writes in notes may relate to his/her writing style, concerns about confidentiality, time available for writing the notes, and his/her judgment about the relevance of the information.

*Issues and advisor contacts.* This study examined the association between the number of issues reported for a student and his/her advisor contacts. It was found that the number of issues reported was positively associated with frequency of advisor contacts. Students who had more issues reported tend to have more advisor contacts.

*Leavers' plans to continue higher education after leaving.* This study addressed the extent to which leavers would continue their higher education after leaving the UMN. It was found that 40% of the 278 leavers had records of enrollment at another school after

they exited the UMN. Considering that NCS is not able to obtain all the leavers' enrollment records because some of the leavers or leavers' schools may block their information, the enrollment rate at other schools could be higher. It was also found that over half of the leavers who intended to continue their higher education did enroll at another institution after leaving the UMN. On the other hand, the majority of leavers who enrolled in another institution had no intention to enroll indicated in advising files.

*Limitations and directions for future studies.* This study has several limitations. One is the relatively small size of leavers (N=99) whose advisor files were reviewed. This may limit our ability to make comparisons between different types of leavers. For several student issues (family issues, low motivation, and culture/connection issues) there appeared to be differences in frequency between leavers who left in good academic standing and leavers who left on probation or suspension. A larger sample may help to test if there are statistically significant differences in these issues among leavers with different academic standings. Another limitation is that this study only used information recorded in leavers' advisor files. Research that makes use of other sources of information such as interviews with advisors or faculty members or student petitions to withdraw from classes may provide additional insight into student leaving.

In addition, there is a discrepancy between the findings of this study and previous studies of issues that were most frequently reported in advising files. The previous studies (Wambach, Hatfield, et al., 2003; Wambach, Mayer, et al., 2003) found that lack of motivation was the most commonly reported issue in leavers' files, while in the present study, low motivation was found to be less common compared to other issues such as poor academic performance, financial issues, and family issues. Several reasons may

explain the discrepancy. One is the difference in coding that included more subcategories of issues in the present study than in the previous studies. The “low motivation” category in the previous studies included not only low motivation issues but also poor time management issues, while in the present study, poor time management issues were coded as lack of study skills. Moreover, as “low motivation” is generally not clearly stated in advising files, coding is largely dependent on raters’ perception and judgment. Thus, the rater effect may explain the difference in issues most commonly reported. Other factors such as the different formats of advising files, characteristics in different student cohorts, and changes in the advising staff may also explain the difference in low motivation issues between this study and previous studies. To explore how common low motivation issues are among GC students, a study using a self-report measure might be useful. Future studies would also need to have a clearer operational definition of “low motivation”.

*Implications.* Electronic advising files have the potential to increase our understanding of the factors that contribute to student leaving. Advisors notes include both information that students’ disclose to advisors and advisors’ observations about students. There are, however, limitations to the usefulness of the information recorded in advisor files. Advisors are likely reluctant to record information that is highly confidential or potentially damaging to a student even if it has a bearing on the student’s decision to leave. We saw in this study a bias against attributing students’ academic problems to low ability or low effort, both possible factors in low academic achievement. Also, a student may be reluctant to attribute their poor academic performance to low effort or low skills. When issues were noted in student files, they tended to be socially acceptable ones such as work conflicts and family obligations rather than drug and

alcohol abuse, gambling, or excessive video game playing which we know from anecdotal evidence are problematic behaviors for some students. Mechanisms for recording advisors' knowledge of student issues that capture the full range of their knowledge without damaging the student advisor relationship would be useful in creating effectively focused interventions.

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