Honors and Non-Honors Student Engagement: A Model of Student, Curricular, and Institutional Characteristics

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Honors administrators may ask whether honors experiences facilitate student growth and whether honors students are inherently smarter than non-honors students and hence more able to seize these opportunities for growth. Although these questions will never fully be answered, we designed

the current study to address the underlying topics of student characteristics and engagement in honors within the larger university.

Students' motivation, their willingness to extend beyond the minimal level, significantly influences engagement. Honors students are engaged in experiences, curricular and extracurricular, that promote development, and the types of additional opportunities available to honors students and the feedback they receive affect participation. The interaction between honors students and their instructional environment may encourage them to engage with available resources more fully than non-honors students do.

Some tendencies, though, are an impediment to engagement. Self-handicapping, for instance, is a characteristic that can interfere with learning by actively encouraging students to withdraw from engaging activities or to fail in preparing for challenging opportunities. Self-handicapping and motivation can be viewed as a continuum affecting both engagement and achievement. Our study compares these characteristics in honors and non-honors cohorts as they relate to the process of engagement.

The purpose of this study was to apply several measures of learning and engagement to a comparable cohort of honors and non-honors students in order to generate a preliminary model of student engagement. Specific purposes were the following:

1. To determine the feasibility for use of several measures of student characteristics that may affect their engagement in the learning process.
2. To compare honors and non-honors students in measures that affect goal orientation and student engagement.
3. To create a model of student engagement that relates to the characteristics of student learning within the context of the teaching-learning environment.

The primary variables included mastery and performance goal constructs, self-handicapping, and student perceptions of engagement. Comparisons between honors and non-honors students in the context of these variables provides implications for teaching-learning strategies in both honors and non-honors educational contexts.

BACKGROUND

Honors education has a tradition of providing learning environments that support active student engagement. Honors students participate in intensive,

mentored experiences and classes heavily invested in discussion and critical analysis. Students who qualify and choose honors may be predisposed to high levels of engagement since they are already a high-achieving group whose willingness to take risks and extend themselves makes them likely to engage actively in learning experiences beyond the curriculum.

Previous Studies of Honors and Non-Honors Students' Learning Characteristics

Research studies comparing honors to non-honors students are rare, and more work is needed to identify the importance and strategic significance of honors programs. In 2004, Carnicom and Clump reported on a study of learning styles that compared honors and non-honors cohorts of entering freshmen. As expected, honors students had higher entering GPAs. The study—done with 45 students (17 honors and 28 non-honors) in a small, urban, Catholic university—describes learning styles, specifically in higher-order thinking skills. The authors used the Inventory of Learning Processes (ILP) and found a significant difference in Deep Processing but not in Methodological Study subscales. Both groups demonstrated strong study skills, but honors students entered at a higher level in organizing and critically evaluating information. The authors suggested that a longitudinal study could be done using the ILP.

Also in 2004, Cosgrove described a secondary analysis of graduation data for honors completers, partial honors, and comparison high-ability students. His study found differences among the groups, with honors completers having higher GPAs and higher graduation rates. Participants in the groups were predominantly white and female. This study was done in a large, public, state-wide system and involved review of more than two hundred academic records.

A recent quantitative study of over a thousand honors students at Utrecht University, Netherlands, used a combined questionnaire of valid and reliable tools. Results showed that the honors students differed significantly from the non-honors students, with the strongest distinguishing factors being the desire to learn, the drive to excel, and creativity (Scager et al.).

These studies explored entering characteristics and graduation rates, but none examined upper-division departmental honors students or change over time. The current study has attempted both, albeit with mixed results.

Self-Handicapping as a Learning Characteristic

At the negative end of the spectrum of student learning characteristics is the tendency for self-handicapping educational behavior, a defense mechanism designed to protect self-esteem. Individuals who self-handicap may intentionally or unintentionally introduce obstacles to success as an excuse for possible failure. Evidence of the negative impact of self-handicapping behaviors on outcomes has been reported for secondary school students and university students (Martin et al.; Dorman, Adams, & Ferguson; Ommundsen, Haugen, & Lund; Prapavessis, Grove, & Eklund; Rhodewalt & Vohs). A recent meta-analysis found a significant inverse association between self-handicapping and academic achievement ($r = -.23$, $p<.001$) (Schwinger et al.). These authors noted that correlations varied with student characteristics and goal-orientation levels. They concluded that educational interventions should include a focus on preventing self-handicapping.

Institutional measures of student engagement have been a focus of research since the development of the National Survey of Student Engagement (NSSE). The NSSE was supported by a grant from the Pew Charitable Trusts and was originally tested by approximately 275 colleges and universities in 2000; it is currently in use worldwide. The NSSE documents active educational experiences reported by students and their effect on learning outcomes. Benchmarks are available nationally in five areas: level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment. The University of Alabama at Birmingham (UAB) participated in the NSSE at the institutional level. The current study used a targeted sample for the NSSE from honors students and non-honors students at UAB.

METHODS

Population & Setting

Eighty-seven ($n = 87$) students participated from honors and non-honors classes and groups. Students were recruited in departmental honors classes, and the Time 1 (T1) surveys were done during or after class. Incentives for student participation were pizza, soft drinks, and gift cards. In anticipation of a Time 2 (T2) follow-up test of students 6–9 months after initial testing, we obtained permission from the NSSE provider to administer the test to a targeted cohort. For the second administration of data collection, some groups

were invited to participate in a face-to-face meeting similar to the initial testing; other groups were unavailable, and so the survey was mailed and/or made available via an online link to SurveyMonkey®.

Instrumentation

Specific instruments used in the study are listed below in Table 1. Tools 1–5 were given at first administration (T1) of the survey, and 1–6 were given at the second administration six to nine months later (T2). Self-regulated learning and motivation were measured from subscales of the Motivated Strategies for Learning Questionnaire and the Self-Regulated Learning Interview Schedule, with student written responses identifying learning contexts and learning/study strategies. Attribution was measured using an adaptation of the Attribution Survey that included causes of success and failure such as ability, effort, luck, rapport with the teacher, and task difficulty. Goal achievement orientation types were identified using Elliot and McGregor's 2 X 2 scale: (a) Performance Approach, (b) Performance Avoidance, (c) Mastery Approach, and (d) Mastery Avoidance. Engagement was measured using a targeted sample administration of the NSSE.

Ethical Protection

The study was approved by the Institutional Review Board (IRB) of UAB, which is an Academic Health Sciences Center and Public University, and two co-investigators completed FERPA training and were granted access to records as Authorized Requestors. Consent included written permission to access student transcripts through BANNER or STARS. Written consent was obtained at Time 1. When applicable, provision was made to have the instructor leave the room for testing in order to assure that student participation was voluntary.

Table 1. Instrumentation

1.	Motivated Strategies for Learning Questionnaire (Midgley et al.; Pintrich & De Groot)
2.	The Attribution Survey (Schoenfeld; Shores).
3.	The Self-Regulated Learning Strategies Schedule (Zimmerman & Martinez-Pons).
4.	The Self-Handicapping Scale (Rhodewalt and Vohs)
5.	The Achievement Goals Questionnaire (Eliott & McGregor)
6.	National Survey of Student Engagement (NSSE). [Targeted cohort T2 only]

RESULTS

Sample Description

The 87 students participating in the T1 part of the survey were recruited from seven schools and/or specialty groups as follows: nursing (30), undergraduate student government (17), multicultural scholars (16), engineering (11), business (9), sociology (3), and education (1). Of the sample, 55% (n = 48) of the sample were enrolled in honors, and 45% (n = 39) were not. A student was categorized as "honors" if s/he was enrolled in a departmental honors program (engineering, nursing, sociology, education, business) or a university honors program (university honors program, global & community leadership honors, science & technology honors). Effort was made to enroll students who were eligible for honors but chose not to enroll, but this distinction was difficult to obtain in most schools with departmental honors programs; lists of honors-eligible students were often not available, and/or, when available, the students did not respond to invitations to participate. The sample selection criteria were broadened to include two additional groups—the student government organization and a select program for multicultural students—to contribute to the non-honors comparison group. Several participants from the student government and multicultural scholars groups were in one of the university honors programs and thus were included as honors. Honors participation and comparisons between honors and non-honors cohorts at T1 are listed in Table 2.

Of the participants, 63% were female and 37% male. The gender and honors cross-tabulation revealed similarities in distribution, with 60% of honors students and 67% of non-honors students being female. The percentage of female students in honors was similar to that of the university as a whole (60%). Gender comparisons of honors and non-honors participation are listed in Table 2. Ethnicity was self-reported on the survey and supplemented with records data as needed. The diversity was good with 18 African American/Black, 9 Asian American/Asian Pacific Islander, 2 Biracial/Multiethnic, 4 Hispanic American, and 54 Caucasian/White. The diversity of the sample was similar to that of the university's undergraduate population, where the majority is 66% and minority 34%. We specifically recruited from the multicultural scholars program (MSP) to get diverse representation. Students in both the university student government association and MSP exemplify leadership characteristics and have been through a selective process similar to honors interviews. They may or may not have been eligible for honors by GPA or specifically invited into an honors curriculum.

In the comparison between honors and non-honors students, the difference in institutional GPA was significant. Institutional GPA for honors was 3.65 (SD 0.26) and for non-honors was 3.28 (0.42) with p<.001. There was not a significant difference between institutional GPA by ethnicity or gender of students. The honors difference would therefore suggest a selection difference as part of admission to an honors program.

A significant difference was also found in ethnicity, with African-American students representing 10% of the honors participants and 36% of non-honors participants (Table 2). The cross-tabulation with honors and non-honors was found to be significant (Chi-square p< .05). Situated in the southern region of the U.S., UAB has a history of working to increase diversity. Increases in numbers of African American students are a priority, and honors has tried to pursue a teaching-learning environment that includes diverse perspectives. However, the addition of the MSP students in the non-honors cohort significantly affected the demographic breakdown.

There were no differences between groups in age or class designation.

Time 1 Results

Descriptive findings from the Motivated Strategies for Learning Questionnaire, Attribution Survey, and Self-Regulated Learning Strategies Schedule revealed few differences; however, initial T1 differences and later T2 differences were found in the Self-Handicapping Scale and Achievement Goals Orientation Questionnaire.

Self-Handicapping

Self-handicapping is a defense mechanism designed to protect self-esteem (Dorman et al.; Martin et al.). Individuals who self-handicap may

Table 2. Comparisons between Honors and Non-Honors Students at Time 1

Variable	Honors (n = 48)	Non-honors (n = 39)	Significance
GPA	3.62	3.23	$p < .001$
% female	60	67	n.s.
% AA race	10	36	$p < .05$
Mean age	23	22	n.s.
Mean class (4 = Sr)	3.1	2.9	n.s.

intentionally or unintentionally introduce obstacles to success as an excuse for possible failure. Our study employed the self-handicapping scale developed by Rhodewalt and Jones. This 25-item scale evidenced reliability for our sample with a Cronbach's alpha = .79. Scores are based on a 6-point scale with 0 "disagree very much," 1 "disagree pretty much," 2 "disagree a little," 3 "agree a little," 4 "agree pretty much," and 5 "agree very much." Responses ranged from 0–5, and the higher the score, the more self-handicapping the student reported. Eight items were reverse-scored, and these were recoded for analysis. A summary score was computed as the sum of the 25 items. The highest possible score was 125. The summary score for this sample was 50 (SD 14), indicating a generally low level of self-handicapping reported. There was no significant difference between honors and non-honors in the summary scores for self-handicapping, with means of 49.8 and 50.9 respectively.

Achievement Goal Orientation

Four different achievement goal orientations were identified using Elliot and McGregor's 2 X 2 scale, which includes the following types:

- Performance Approach: Competition with expected success
- Performance Avoidance: Competition with low expectation of success
- Mastery Approach: Competence development with expected success
- Mastery Avoidance: Avoidance of demonstration of incompetence

We used this tool to rate mastery and performance orientation and approach and avoidance. Four subscales made up the survey, with 3 items for each scale. Participants responded from 1 to 7, with 1 "Not at all true for me" and 7 "Very true for me." Subscale means were computed for each construct. For the four subscales, participants scored higher on both the approach constructs than on avoidance goals. Mastery Approach was highest and Mastery Avoidance lowest, indicating mastery goals were more effective in defining motivation than performance goals. There were no statistically significant differences in constructs when contrasting honors vs. non-honors students at Time 1 (Table 3); however, honors students scored higher on Mastery Approach and non-honors students scored higher on Mastery Avoidance and Performance Avoidance (bolded).

Relationship between Achievement Goals and Self-Handicapping

Further analysis was done to correlate achievement goal constructs with self-handicapping. Mastery Avoidance was highly correlated with self-handicapping ($r = .36$, $p < .01$), with higher self-handicapping associated with higher avoidance. Performance Avoidance was even more significantly correlated with self-handicapping ($r = .40$, $p < .001$), again with high self-handicapping associated with avoidance. Correlations are listed in Table 4.

Time 2 Results

Follow-up data were obtained between six and nine months after the baseline survey. The response rate for the T2 cohort (n=50) was 57% of the T1 sample (n = 87).

GPA and Demographics

Honors students at T2 still demonstrated higher institutional GPA compared to non-honors (Table 5). At T2, the proportional percentages of ethnicity held with 34 (68%) Caucasian, 10 (20%) African American, and 6 (12%) Other/Asian/Hispanic, which continued to parallel the university at 68% White and 32% Minority. The T2 cohort also (n=50) retained the same demographic ratio of T1 (n = 87) in gender, age, and class.

Table 3. Comparison of Honors vs. Non-Honors on Goal Constructs (Time 1)

Characteristic	Honors	Non-honors	Sig.
Performance Approach	5.3	5.3	n.s.
Mastery Avoidance	4.0	4.3	n.s.
Mastery Approach	**5.8**	5.6	n.s.
Performance Avoidance	4.5	**5.0**	n.s.

Table 4. Correlation of Self-Handicapping and Goal Constructs

Self-Handicapping vs.	r	Sig
Performance Approach	-.09	n.s.
Mastery Avoidance	.36	$p < .01$
Mastery Approach	-.19	n.s.
Performance Avoidance	.40	$p < .001$

Table 5. Comparison of Time 1 and Time 2 on GPA and Demographics

Variable	Time 1			Time 2		
	Honors (n = 48)	Non-honors (n = 39)	Significance	Honors (n = 31)	Non-honors (n = 19)	Significance
GPA	3.62	3.23	$p < .001$	3.64	3.29	$p < .01$
% female	60	67	n.s.	68	68	n.s.
% AA race	10	36	$p < .05$	10	37	$p = .05$
Mean age	23	22	n.s.	22.5	21.8	n.s.
Mean class (4 = Sr)	3.1	2.9	n.s.	3.0	3.0	n.s.

National Survey of Student Engagement (NSSE)

The targeted NSSE was administered at Time 2 only. Findings are described in three categories: strategies for student engagement in learning, academic/cognitive activities, and writing activities.

Strategies for Student Engagement in Learning (NSSE)

Statistically significant differences were found between honors and non-honors students on the following (in all instances, $p<.05$), with honors students recording higher engagement in challenging activities:

a. Prepared 2 or more drafts of a paper or assignment before turning it in.

b. Worked on a paper or project that required integrating ideas or information from various sources.

c. Included diverse perspectives (different races, genders, religions, political beliefs, etc.) in class discussions or assignments.

d. Participated in a community-based project (e.g., service-learning) as part of a regular course.

e. Talked about career plans with a faculty member or advisor.

Academic/Cognitive Activities (NSSE)

In answering the question "During current school year how has coursework emphasized the following mental activities?" honors students reported less "memorizing" than non-honors students. Additionally, in each of the following, honors students reported more activities toward the more complex emphasis ($p < .05$):

a. Analyzing

b. Synthesizing

c. Making judgments

d. Applying theories

Writing (NSSE)

When asked about how much reading and writing they had done during the school year, honors students reported more involvement in writing.

a. Books read as assignments n.s.

b. Books read on own n.s.

c. Written reports 20 pages + $p < .01$

d. Written reports 5–19 pages $p < .01$

e. Written reports <5 pages $p < .05$

Comparisons of Goal Orientation and Self-Handicapping

Eighty-four students completed all goals orientation scales at Time 1, and 42 completed them all at Time 2. Although no differences were statistically significant, differences occurred between honors and non-honors groups from Time 1 to Time 2: honors students' scores remained the same or increased on Mastery Approach and Performance Approach; non-honors students' scores increased on both Mastery Approach and Mastery Avoidance; and non-honors students, who scored higher than honors students on self-handicapping at both T1 and T2, increased in self-handicapping. Self-handicapping was higher in non-honors students compared to honors students at the beginning of the study, and this disparity increased at Time 2 (Table 6). However, this finding was not statistically significant; within individuals, the change in self-handicapping from T1 to T2 was minimal and non-significant.

The correlations between self-handicapping and goal orientations are summarized in Table 6. At Time 1, higher self-handicapping was correlated to higher avoidance for mastery and performance, respectively ($r = .36$, $p < .01$; $r = .40$, $p < .01$). At Time 2, a significant negative relationship occurred between self-handicapping and Mastery Approach ($r = -.42$, $p < .01$), with higher self-handicapping associated with lower Mastery Approach.

In comparing honors and non-honors students, the strength of these relationships remains high, with greater self-handicapping associated with Mastery Avoidance and Performance Avoidance in both groups (Table 7). At Time 2, the strongest correlation was between lower Mastery Approach and higher self-handicapping in the non-honors group ($r = .69$, $p < .01$).

Table 6. Correlations between Self-Handicapping and Goal Orientation (All)

Goal Constructs	Self-Handicapping T1	Self-Handicapping T2
Performance Approach	-.10	-.22
Mastery Avoidance	.36**	.14
Mastery Approach	-.19	-.42**
Performance Avoidance	.40**	.26

** $p < .01$

Regression Results

Four multivariate linear regression analyses were conducted to examine the linear relationship of eight independent variables as predictors of each of the achievement goal orientations: Mastery Approach, Mastery Avoidance, Performance Approach, and Performance Avoidance (Table 8.). The predictor variables used were the self-handicapping score, two attribution subscales (success and failure), and five motivated strategies of the learning questionnaire (MSLQ) subscales: self-efficiency, intrinsic value, test anxiety, cognitive strategy use, and self-regulation.

Mastery Approach

The model in the prediction of Mastery Approach was statistically significant: $F(8,75) = 7.059$, $p < .001$. The R^2 of .430 (adjusted $R^2 = .369$) indicates that 43% of the variance in the Mastery Approach score can be accounted for by the linear combination of the eight variables. Only one predictor held a significant beta weight in the final model: the MSLQ intrinsic value score had a standardized beta weight of .411 ($t = 3.253$, $p = .002$). The positive value of the beta indicates a positive relationship between intrinsic value and the Mastery Approach.

Mastery Avoidance

The model in the prediction of Mastery Avoidance was statistically significant: $F(8,75) = 2.148$, $p = .041$. The R^2 of .186 (adjusted $R^2 = .100$) indicates that 19% of the variance in the Mastery Avoidance score can be accounted for by the linear combination of the eight variables. In the final model, one predictor had a beta weight significant at the .05 alpha level. The attribution-failure score had a standardized beta weight of .256 ($t = 2.104$, $p = .039$). The positive value of the beta indicates a positive relationship between attribution-failure and Mastery Avoidance

Performance Approach

The model in the prediction of Performance Approach was statistically significant: $F(8,75) = 4.711$, $p < .001$. The R^2 of .334 (adjusted $R^2 = .263$) indicates that 33% of the variance in the Performance Approach score can be accounted for by the linear combination of the eight variables. Only one variable in the final model had a statistically significant beta weight. The MSLQ

Table 7. Self-handicapping in Honors and Hon-Honors Students

Goal Orientation	Honors: Self-Handicapping T1	Honors: Self-Handicapping T2	Non-Honors: Self-Handicapping T1	Non-Honors: Self-Handicapping T2
Performance Approach	-.15	-.21	-.02	-.22
Mastery Avoidance	+.30*	+.12	+.45**	+.16
Mastery Approach	-.26	-.30	-.11	-.69**
Performance Avoidance	+.42**	+.33	+.38*	+.08

*p < .05; **p < .01

Table 8. Regression Results

Dependent Variable	Regression Coefficient	Sig.	Variance Explained	Primary Factor
Mastery Approach	$R^2 = .430$	$p < .001$	43%	intrinsic value (MSLQ)
Mastery Avoidance	$R^2 = .186$	$p < .05$	19%	attribution-failure
Performance Approach	$R^2 = .334$	$p < .001$	33%	self-efficacy (MSLQ)
Performance Avoidance	$R^2 = .256$	$p < .01$	26%	cognitive strategy use (MSLQ)

self-efficacy score had a standardized beta weight of .626 ($t = 4.349, p < .001$). The standardized beta weight of this variable indicates a positive relationship between the self-efficacy score and Performance Approach.

Performance Avoidance

The model in the prediction of Performance Avoidance was statistically significant: $F(8,75) = 3.232$, $p = .003$. The R^2 of .256 (adjusted $R^2 = .177$) indicates that 26% of the variance in the Performance Avoidance score can be accounted for by the linear combination of the eight variables. Only one variable in the final model had a statistically significant beta weight. The cognitive strategy use score had a standardized beta weight of .342 ($t = 2.254, p = .027$). The standardized beta weight of this variable indicates a positive relationship between the cognitive strategy use score and Performance Avoidance.

Characteristics of Engagement

The NSSE gives institutional data on five subscales: Level of Academic Challenge, Active and Collaborative Learning, Student-Faculty Interaction, Enriching Educational Experiences, and Supportive Campus Environment. The scale items are computed on a 0–100 scale (Table 9).

The highest subscale (all participants) was Supportive Campus Environment and the lowest was Enriching Educational Environment. Understanding the reasons behind these scores is an area for future investigation.

Honors vs. Non-Honors Comparisons on NSSE Subscales

Honors and non-honors students' scores on NSSE subscales were compared with results presented in Table 10. Although not statistically significant, honors students reported higher levels for academic challenge, enriching environment, and supportive campus. These differences, if persistent, could

Table 9. Descriptive Statistics for NSSE Institutional Subscales

Subscale	N	Minimum	Maximum	Mean	SD
Level of Academic Challenge	38	7.9	49.1	27.2	10.4
Active & Collaborative Learning	41	9.5	76.2	45.4	18.1
Student-Faculty Interaction	39	.00	77.8	39.3	21.4
Enriching Educational Environment	37	.00	44.4	15.5	11.6
Supportive Campus Environment	38	33.3	83.3	61.7	13.2

possibly be significant with a larger sample size. Differences in the level of academic challenge approached significance, with honors students reporting a higher level of academic challenge in their overall work.

DISCUSSION

Feasibility Issues

Several discussion points emerge from the data analysis, including the feasibility of the methods, sensitivity of the measures, and effectiveness in demonstrating comparative outcomes. To obtain good data, surveys must be administered with sufficient time for completion. The battery of tools given in this pilot required 30–45 minutes to complete, creating a need for incentives to participate. Participants received pizza and soda if they took the survey in person and a $10 gift card if they mailed or completed Time 2 surveys online via SurveyMonkey® software. Online administration might have given greater opportunity for detailed and accurate completion, which would be important in using the results for student advising, curricular evaluation, or other educational purposes. Of the scales administered, neither the Motivated Strategies for Learning Questionnaire (MSLQ) nor the Attribution Survey scales discriminated between honors and non-honors students, and the Self-Regulated Learning Strategies would require more testing to give useful information for planning. The Achievement Goals Questionnaire, however, especially in conjunction with the Self-Handicapping Scale, did show discrimination and gave clues on the processes for learning. The NSSE indicated differences between the honors and non-honors students regarding engagement in challenging activities, academic/cognitive activities, and writing.

The authors entered this project to learn the feasibility and educational implications of conducting such research, and we learned numerous lessons

Table 10. NSSE Subscale Difference between Honors and Non-Honors

Subscale	Honors *Mean (SE)*	Non-honors *Mean (SE)*	t	df	Sig
Level of Academic Challenge	29.2 (2.00)	23.2 (2.91)	1.71	36	.10
Active and Collaborative Learning	44.1 (3.27)	48.0 (5.46)	-0.65	39	.52
Student-Faculty Interaction	36.5 (3.85)	44.9 (6.82)	-1.15	37	.26
Enriching Educational Environment	16.6 (2.44)	13.3 (3.03)	0.80	35	.43
Supportive Campus Environment	63.6 (2.62)	58.1 (3.69)	1.21	36	.24

despite the inconveniences of being from different disciplines and different institutions. Obtaining adequate sample sizes was also a challenge, and modifications we made shifted the conceptual basis of our comparisons during the project. The tools were sensitive and sufficient measures of the significant characteristics of student motivation and learning but were not always sensitive enough to discriminate between groups; they may have been more effective in identifying students at risk for avoidance and lack of engagement. The leadership activities of a majority of the non-honors cohort further complicated the analysis; because these students were actively involved in student government and/or the multicultural scholars program, they may have been part of strong communities with active learning strategies similar to honors programs. The sample reflected a high diversity, which was particularly important in adequately defining the educational processes for multicultural students.

GPA and Demographic Differences over Time

The persistence of higher GPAs among honors students is expected since they are recruited and accepted based on their GPA and their orientation toward high academic achievement. The higher GPA among honors students matches findings presented from the same institution that the university honors program students achieved higher GPAs than others from the institution after controlling for ACT (Sloane).

Relationship between Self-Handicapping and Achievement Goals Orientation

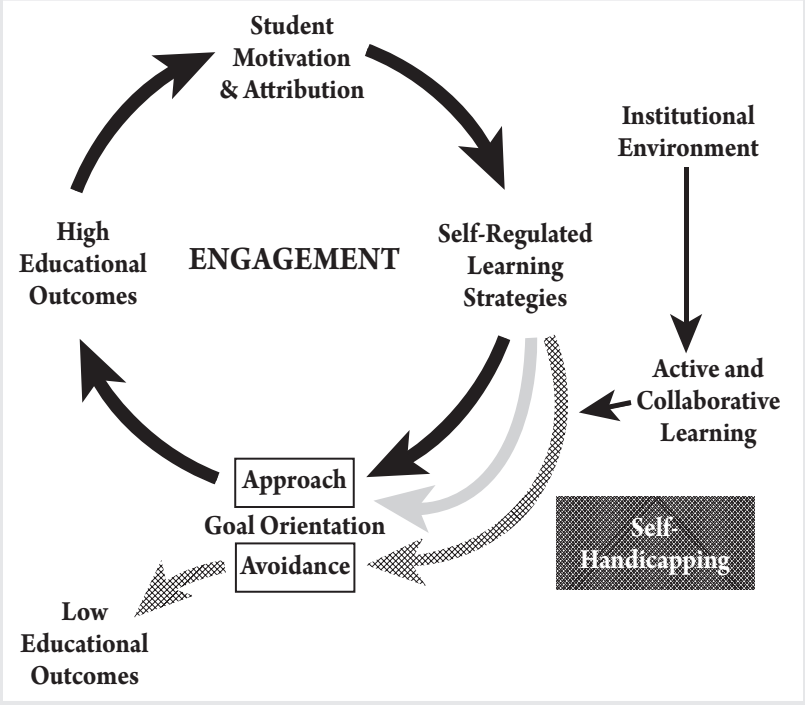
Data analysis revealed a strong relationship between achievement goals orientation and self-handicapping. Students who indicated high Mastery Avoidance also indicated significant self-handicapping behaviors ($r = .36$, $p < .01$). Students who reported Performance Avoidance identified even higher self-handicapping ($r = .40$, $p < .001$). These findings led the authors to deduce a strong relationship between self-handicapping and avoidance orientations, echoing a study of secondary school students in which self-handicapping was found to be negatively associated with approach and positively associated with avoidance goals ($r = .25$, $p < .05$) (Shields). The stronger findings in the current study may be associated with the increased independence and self-responsibility at the collegiate level and may also show a development of engagement that comes with age, giving insight into emerging-adult educational processes.

Preliminary Model Development

Student motivation, attribution, self-regulated learning, and self-handicapping were subsequently incorporated into the model of student characteristics and engagement (Figure 1). Institutional environment could include both honors programs and non-honors programs. Engagement is a unifying force for successful educational outcomes, including retention and graduation. The quantitative relationships of this diagram should be explored further with adequate samples and statistical modeling.

In this model, student motivation and attribution influence the implementation of self-regulated learning strategies. When students employ techniques of self-handicapping, they may pull away from engagement, mediated through a Mastery Avoidance or Performance Avoidance goal orientation (Figure 1, crosshatched path). Avoidance goal orientation results in disengagement and can lead to low educational outcomes. Institutional factors that may correct and enhance engagement include developing an institutional environment to

Figure 1. Initial Model of Student Characteristics and Engagement



foster active and collaborative learning. These factors (Figure 1, gray path) were explored in the Time 2 data using correlations among subscales. Based upon Time 2 data, institutional environment may have had a positive impact on active and collaborative learning. For these students, engagement and/or use of campus enrichment increased.

Over the six to nine months of our study, honors students maintained higher institutional GPAs than non-honors students. The honors students also continued to score higher on Mastery Approach and Performance Approach while the non-honors students continued to score higher on Mastery Avoidance and Performance Avoidance. Non-honors students increased their Mastery Avoidance, Performance Approach, and Mastery Approach, and they decreased their Performance Avoidance. In general, the disparity between honors and non-honors students in self-handicapping increased over time, with non-honors students demonstrating higher self-handicapping at Time 2. This finding may have implications for our educational strategies as we identify and intervene with students over the course of a term and across different teaching-learning environments. We envision an experimental study with intervention directed toward identifying students at risk and finding ways to engage them more effectively.

Success supports future success, and high educational outcomes support continued engagement and development of new, positive goal orientations. One strategy to track goal orientations is related to "goal-as-motive," which occurs when actions are given meaning, direction, and purpose so that the quality and intensity of behavior change as the goals change; reinforcing some goals (and not others) can differentially change the reasons why students learn, changing their motivation (Covington). The implications of this line of research might include ways to enhance student motivation and engagement at the collegiate level.

Student Engagement as Measured by NSSE

Student engagement was measured in subscales of strategies and student engagement in learning; academic/cognitive activities; and writing activities.

Strategies and Student Engagement in Learning

Honors students participate in an individualized curricular program with high-intensity experiences. The findings of this study validated the quality of these experiences and the perspectives of honors students participating in

them. The availability of service learning and community-based experiences is becoming widespread across campuses; however, honors students may be participating in these more than non-honors because honors programs expect and encourage them. Students with high achievement orientation also seek out extra participation in university initiatives that would support their development across affective as well as cognitive domains, and these include service, internships, and study abroad. Students who seek entry into honors programs seeking a challenging academic load may also be willing to take on more engagement in service learning and community service. In the T1 results, motivation, which includes intrinsic value, was a significant predictor of the Mastery Approach in regression analysis.

Academic/Cognitive Activities

On the NSSE, honors students reported more of the high-level activities of analyzing, synthesizing, making judgments, and applying theories. Students need educational guidance in order to make the leap into cognitively demanding challenges like writing integrated arguments and referencing multiple perspectives. Honors programs implement complex assignments and rubrics to stimulate creative and integrative thinking in ways that facilitate conceptual thinking. Our findings confirm that students themselves note greater exposure in honors to extensive skill-building in the cognitive domain. Since study participants were mostly juniors and seniors taking upper-level classes, they were all likely to be doing a fair amount of analyzing, synthesizing, and making judgments. The difference in the Applying Theories dimension may come from honors students' immersion in the theoretical framework of an honors thesis.

Writing Activities

The development of writing skills assists students in the cognitive work of organization, scholarship, and comprehensive understanding. In writing position papers and opinion pieces with well-referenced sources, the student draws on a wide range of literature that prepares the way for community engagement in a range of venues, supporting the larger goals of contributing to society.

In all the study items that addressed writing, honors students reported more active roles in educational activities: more drafts of papers, integration of ideas and diverse perspectives, community-based projects, and career

planning. Honors students reported writing more papers of all lengths requiring more complex and integrated ideas. The small, individually focused teaching-learning environment of honors encourages high levels of experiential learning and interaction with faculty. Our findings provide data confirming these characteristics in honors.

The lack of difference on the "Book" questions may reflect that honors coursework and honors theses rely more on primary literature in professional journals than on books. The production of a lengthy honors thesis may also have contributed to differences in the reports on various lengths of papers, but possibly honors students just tend to write longer papers.

Goal Orientation and Self-Handicapping

Comparisons of Goal Orientation and Self-Handicapping

An important consideration is that we lost more of the non-honors cohort from T1 to T2: retention to completion of the study for honors was 60% and for non-honors was 37%. Nevertheless, honors students were consistently less likely to engage in avoidance approaches than non-honors students, supporting our model that students in more challenging and personally focused programs may have expectations and support that non-honors students do not. The shift in Mastery Avoidance, which is both a critical observation of our total teaching-learning environment and a strategy for change, seems particularly interesting but might be an effect of differential dropout. Looking at individual change scores might illuminate whether any real shift is going on. If we involve students more actively and develop new, effective methods for supporting student engagement, we believe that the student experience will be more productive. The limitations of our work, though, include a lack of methods to test intervention strategies unless honors itself is considered an intervention.

Individual Change in Goal Orientation

When comparing changes within individuals (Paired t-Test), we noted significant changes. Honors students increased their Performance Approach (+ .2, $p = .18$) but also significantly increased their Mastery Avoidance (+.7, $p < .05$). Non-honors students increased their Mastery Avoidance (+.6, $p = .09$) but also decreased Performance Avoidance (-.6, $p = .22$), increased Performance Approach (+.2, $p = .3$), and significantly increased Mastery Approach (+.5, $p < .05$). These results could have been associated with the differential

dropout of those who stayed in the cohort through T2, with honors students demonstrating higher approach and lower avoidance behaviors.

The longitudinal progression may correspond to lack of engagement as described in the model. As students become less engaged, self-handicapping behaviors and avoidance become more pronounced. This vicious cycle may continue until students are lost to an achievement orientation or withdraw entirely. The disparity between honors and non-honors students in self-handicapping increased over time, with non-honors students demonstrating higher self-handicapping at T2, which has implications for our educational strategies as we identify and intervene with students over the course of a term and across different teaching-learning environments. We have yet to explore the relationship between intentional experiential learning and goal orientation. We envision an experimental study with intervention directed toward identifying students at risk and finding ways to engage them more effectively.

Our beginning descriptive research has helped us to identify the interactions among measurable variables of student entrance and selection, performance, engagement, goal orientation, and the related influence of self-handicapping. Our research has demonstrated the utility of measuring student perceptions in curricular evaluation and has provided a framework for future studies of curriculum, administration, and student engagement, setting the parameters for effective teaching and learning in our college environment.

Regression

In each of the four goal constructs, there was a significant regression between the multiple measures of motivation, attribution, and self-handicapping, and the prediction of all four goal orientations: Mastery Approach, Mastery Avoidance, Performance Approach, and Performance Avoidance. This regression supports the model's prediction that higher self-handicapping creates avoidance through decreasing engagement. When institutional variables are able to serve as intermediaries, there is the possibility of reengagement toward positive learning outcomes.

Institutional Characteristics

The institutional characteristics showed wide variability based on student self-report but functioned to detect student understanding of campus-wide resources and activities. When comparing honors to non-honors students, we found no statistically significant difference in any of the subscales. However,

honors students scored higher levels than the non-honors cohort in three of the five scales: level of academic challenge, enriching educational experiences, and supportive campus environment. The non-honors cohort scored higher on active and collaborative learning and student-faculty interactions. The data indicated increased engagement and/or use of campus enrichment in both groups over time. During the period of the study, UAB began numerous initiatives to increase engaged learning on campus.

Limitations

More honors students (60%) completed the T2 surveys than non-honors (37%). The small incentive, a gift card, may not have been enough for some original participants to complete the T2 surveys, which may have caused them to self-select out regardless of the teaching-learning environment. The sample size and time frame may have been insufficient to detect completion differences in honors and non-honors students. The 6–9 months between T1 and T2 data may have led to a lack of differences in the short term without affecting final completion rates.

The actual extent of participation in additional or high-impact experiences is not known. Future research should combine portfolio assessment of activities to determine differential extracurricular experiences. We made some attempt to equalize this factor by recruiting participants from a multicultural leadership organization that was not affiliated with honors.

Engagement of Honors and Non-Honors Students

The purpose of this study was to create a model of student engagement that relates to the characteristics of student learning within a teaching-learning environment. The model of student engagement relates learner characteristics to the processes of educational achievement and suggests ways to promote engagement. The study also shows distinct differences between honors and non-honors cohorts that can give insight into the structure and function of teaching-learning environments. For example, honors students described more challenging experiences, but non-honors students described more collaborative experiences, and this could be the basis for further study.

Due to the sample size and the difficulty involved in such studies, the findings can only be suggestive at this point. Further work is needed to examine student retention and achievement in relation to processes of student engagement. Kuh states that students' willingness to extend themselves influences

engagement. Honors programs have both excellent students and a creative learning environment to support such extension and engagement. For non-honors students, methods of strengthening engagement such as active learning and collaborative classrooms may facilitate approach orientations and support reengagement even after an initial path of avoidance or self-handicapping. Select groups such as the multicultural leadership organization can provide settings to encourage self-efficacy and offer strategies for overcoming barriers to achievement. Perseverance influences achievement regardless of giftedness or talent (Snyder et al.). The enriching educational environment of a college or university provides many opportunities for learning but only if the student engages with them. Additional assessments of characteristics and processes are needed to strengthen engagement.

CONCLUSIONS

Preliminary findings demonstrate both the feasibility and applicability of studying the effect of honors on student engagement and learning. While the selection of higher-performing students for honors programs might create bias, the presence of higher self-handicapping in the non-honors group clearly relates to the conceptual model proposed. As institutions seek to create the best environment for learning, attention to student engagement is paramount. Not only do those students who seek the higher academic challenge of honors benefit, but also those who actively participate in enriching experiences and seek collaboration may complete at higher rates than those who do not. As stated in the Basic Characteristics of a Fully Developed Honors Program (NCHC, 1994, 2014):

> The [honors] program serves as a laboratory within which faculty feel welcome to experiment with new subjects, approaches, and pedagogies. When proven successful, such efforts in curriculum and pedagogical development can serve as prototypes for initiatives that can become institutionalized across the campus.

The current research was an initial attempt to relate student engagement and institutional characteristics to educational goals in honors and non-honors students. Future research can better ascertain these relationships and the role institutional programs can play in furthering educational development.

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