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Adding Value through Honors at the University of Iowa: Effects of a Pre-Semester Honors Class and Honors Residence on First-Year Students

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Activities that take place early in students' college career can strongly influence their academic engagement and success. Two experiences that honors programs may provide during the initial phases of the undergraduate experience are pre- or early-semester programs and honors residence halls. This study compares honors students who lived in an honors residence hall and/or took part in a pre-semester academic, credit-bearing class upon entry into college to their honors peers who did not elect these options. It tracks the degree of the students' subsequent engagement with the honors program and also several measures of their academic success, such as grade point average (GPA), during their undergraduate experience. Results indicate that students who elected to participate in a pre-semester class and live in an honors residence were more engaged in the honors program and had greater

academic success overall at the university than honors students who did not. This direct comparison of honors program students who have elected certain honors experiences to those who have not strengthens the claim that specific honors experiences add value to the undergraduate experience.

RELATED RESEARCH

Not surprisingly, the scholarship on first-year experiences and how they affect student success is voluminous: there are many articles and books on the topic as well as the presence of a national center, the National Resource Center for the First-Year Experience and Students in Transition, with a journal, monograph series, and annual conference dedicated to the topic. Yet, even with the prevalence of first-year experiences, research on the effects of honors first-year seminars is limited and consists mostly of qualitative descriptions of local versions of the seminar. (See Vander Zee et al. 2016 for a survey of the research on honors first-year seminars.) Moreover, the pre-semester honors academic experience, which is the focus of this study, warrants distinct treatment from a first-year seminar in that its time and length of delivery (i.e., pre-semester and four days) significantly influence its effects.

We could find only one recent data-based study on a pre-semester experience (Perrine and Spain 2008) related to our study. Although Perrine and Spain (2008) did not specifically examine pre-semester experiences among honors students, the pre-semester experience they did evaluate was similar enough to the pre-semester class for entering honors students that we examined to inform our thinking. Perrine and Spain (2008) did a two-year longitudinal study on the effects that an optional, non-credit, six-day-long, pre-semester orientation program had on academic credits earned, GPA, and college retention. The orientation program was designed to help incoming students integrate into the university community. It included speakers; workshops on academic and social issues; and social events involving students, faculty, and staff. Participants moved into campus residence halls one week prior to the beginning of the fall semester, and the orientation took place that week.

Enrollment was offered to all entering students, including transfer students. Perrine and Spain (2008) used multiple regression techniques to filter out other possible predictors of academic success, including high school GPA, ACT composite, and gender. They evaluated data from a student survey and found that although participants in their pre-semester orientation program indicated that the experience helped with their academic and social adjustment to college, the orientation program had little effect on retention, credits earned, and college GPA.

As with first-year seminars, much scholarship exists on the effects of residence halls and living-learning communities on the success of students (for a selective survey see Frost and Kay 2015; also Rinn 2004). Little comprehensive data have been collected, however, specifically on the effects of the honors residence hall experience on students' academic outcomes (Rinn and Plucker 2004). As Rinn and Plucker (2004) note, how separating honors students from the general population via honors housing affects them "has not been studied comprehensively," and thus the research currently does not give insight into its possible benefits or repercussions (63).

We found four older data-driven studies specifically on the effects of housing for high-ability students. DeCoster in two studies (1966 and 1968) tracked the effects on academic achievement of placement of high-ability students in different concentrations in residence halls as compared to high-ability students randomly assigned to their residence halls. He found that a 50% to 100% concentration of high-ability students living in the same residence hall produced a significant rise in GPA, whereas high-ability students randomly assigned a residence hall showed no significant increase in GPA.

Another study (Duncan and Stoner 1975), which was undertaken at Southern Illinois University at Carbondale, compared the GPAs of 93 high-ability students, termed President's Scholars, who lived in the same residence hall, Smith Hall, over a period of three quarters to the GPAs of 84 other President's Scholars who were selected at random among those who lived elsewhere (other residence halls, off-campus, or with their parents at home). Results

were that the mean GPA of President's Scholars living in Smith Hall was not significantly higher than that of President's Scholars living elsewhere. Yet, Duncan and Stoner (1975), on the strength of slightly higher GPAs for those in Smith Hall and their survey results, state that "there appear to be some positive effects on grade point averages" (7).

In one other older study, Stewart (1980) compared the academic achievement of honors students in an honors residence hall to that of honors students living in non-honors residence halls. The results of his study indicate that "being a resident of the general honors unit is not a significant factor with respect to an honors student's GPA" (28). Stewart's study (1980), however, is limited in its scope. He tracked 74 honors students (30 who lived in honors housing and 44 who lived in non-honors housing) for only two semesters. The small sample size and short duration of Stewart's study may make his results inconclusive.

A more recent and comprehensive data-driven study that tracks the effects of an honors residence hall on the academic success of honors students was done by Campbell and Fuqua (2008). Their study tracked for a period of five years a cohort of 336 entering freshmen who were part of an honors program at a large, Midwestern, public university. The purpose of the study was to identify factors that were potential predictors of completion in the honors program. Their classifications were completers, partial completers, and non-completers. Campbell and Fuqua (2008) found that the most important discriminating variables were high school GPA, high school class rank, first-semester college GPA, and initial housing assignment into either honors or non-honors housing. The study indicates that the first-semester college GPA was the most important predictor of completion in the honors program, but the second most important predictor of honors completion was honors housing. Specifically, students who lived in honors housing for their first semester completed the honors program at a substantially higher rate than those who did not. What is not evident from the study, however, is whether this result was because the environment in honors housing helped with program completion or because

students who were initially more committed to the program chose honors housing.

Finally, as part of a literature review of studies on the effects of housing for the general student population, Rinn (2004) considers the academic and social effects of living specifically in honors residence halls. Based on her review of the literature, she speculates that honors students who live together in the same residence hall are “likely to facilitate and reinforce the academic achievement of one another” (70). Yet, in her conclusion she maintains that although living in an honors residence hall can influence or enhance academic achievement, “the social effects are arguably controversial” (76). Rinn (2004) mentions as examples of possible negative effects self-segregation, the formation of “narrow peer groups,” and experiencing “isolation from the rest of the campus” (76). She thus leaves readers uncertain about the overall benefit of honors housing.

RESEARCH METHODS AND SAMPLE

Setting for the Study

The Honors Program at the University of Iowa, which is a large, public, highly active research university, was founded in 1958 as a program within the College of Liberal Arts and Sciences. The honors program became university wide, serving all undergraduate degree-granting colleges, in 2006. Its student population today is about 3,200, with approximately 700 entering first-year students per year. Throughout its existence until 2013, the program’s primary focus was disciplinary honors, with students earning honors in the major at graduation by meeting departmental requirements and maintaining a strong grade point average at the university. In 2013, the honors program implemented a curriculum and program of study for awarding what then became known as “university honors.” Many honors students (about 60%) still completed departmental honors as part of university honors, but either form of honors could be done separately.

Through the years a variety of efforts have been directed toward building community among University of Iowa honors students

early in their university experience. The first of these was honors-specific housing, largely in a residence hall known as Honors House, and the second, which was added later, was a pre-semester academic experience for entering honors students, titled "Honors Primetime." This study looks specifically at these two opportunities for the value they add to the honors experience.

In recent years, Honors House, an interdisciplinary living community for entering honors students, is the home for about one third to one half of the honors program entering class. It is specifically for entering honors students, and the only returning students who live there are the resident assistants. All resident assistants are honors students, but they are selected by the office of university housing and not by the honors program. Honors House is directly attached to the Blank Honors Center, which is home to the honors professional staff, classrooms, the Belin-Blank International Center for Gifted Education and Talent Development, and a 12,000-square-foot student center open to all honors students. While the student center is open to all honors students, it is commonly viewed, however, as the extended lounge space for Honors House by its residents. Although Honors House is commonly referred to on campus as a living-learning community, it does not have some of the features associated with these communities, such as common coursework and a shared disciplinary theme. Both the honors program and the Honors House resident assistants host a variety of events each year. Examples of these would be a scavenger hunt in the Blank Honors Center to meet our staff, a star-gazing event with an astronomy professor, an off-campus movie night with an invited faculty speaker, and an end-of-year gala organized by the students. None of these events is required, and participation varies between 10 and 50 percent of the Honors House residents. Overall, a strong sense of community exists within the residents of Honors House, and they are more likely to interact with the honors program professional staff than honors students who live in other residence halls.

Offered the week before fall semester classes begin, the pre-semester academic experience, Honors Primetime, is a four-day,

one-credit-hour course divided into small academic workshops. It is an elective option for entering honors students, and about one third to one half of the entering class chooses to participate in any given year. Registration for Honors Primetime is done as part of the fall schedule; students identify topical areas that interest them, such as social sciences or public policy, rather than selecting a specific workshop. The workshops are capped at twenty students and vary in disciplinary topics. Some examples of topics include learning how flight developed in birds, the mechanisms of volcanic eruptions, food sourcing for local restaurants, and a choral group learning about protest songs. All workshops are hands-on; there is no homework outside of the workshop class times, which are morning and afternoons for three-and-a-half days; and no tests are allowed. Primetime begins with a welcome event and guest speaker, and it culminates with three- to five-minute presentations by selected students from each workshop to all the Honors Primetime participants. Grading is done on a satisfactory/unsatisfactory basis.

Enrollment in Honors Primetime and selection of Honors House are optional for entering honors students. Honors Primetime has about 400–500 students taking part each year, and Honors House has about 320–350 residents each year. Honors Primetime is open to any entering honors student who chooses to take part. Honors House is available on a first-come, first-served basis when honors students make their housing selections with the university. Interested students have never been closed out of Honors Primetime if they registered on time, but some entering students have not been able to live in Honors House because they signed up for housing at a date later than other entering students. The majority of students who elect to take part in Honors Primetime also elect to live in Honors House.

Preliminary Study

This study was initiated to determine whether membership in the University of Iowa Honors Program affected student success and, more specifically, how first-year experiences influence success. A preliminary study compared the differences in the mean GPA of

students who entered the university as first-time, full-time, first-year undergraduates and honors members to those who qualified for entry in the honors program but did not accept membership in the program. Specifically, this group, which we call “honors peers,” was defined as any student who entered the university with the ACT composite (≥ 30) and high school GPA (≥ 3.8) required for honors membership as an incoming first-year student but did not accept membership into the honors program. The requisite ACT composite and high school GPA were the only requirements for honors membership: that is, there were no additional application requirements other than accepting membership in the honors program. (The University of Iowa Honors Program invites qualified students after they are admitted to the university.)

The data set of this preliminary study began with 4,300 students who entered the university as first-time, full-time, first-year undergraduate college students in fall semesters between 2013 and 2016. From the original group, 175 cases were rejected for incomplete information, which left 4,125. Of that number, 3,332 entered as members of the honors program, and 793 declined the honors invitation and entered the university as honors peers; we measured the GPA of these 4,125 cases after their first year of enrollment. When measuring the GPAs of graduates, we only considered the students who earned a bachelor’s degree at the university through the spring 2017 semester. This cohort of graduates included 578 students who entered as honors members and 164 who were honors peers.

The academic success, as indicated by college GPAs, of students who entered as honors members and those who entered as honors peers (i.e., students of comparable academic ability) differed significantly ($p \leq .05$). As entering first-year students, the honors members had an average four-point high school GPA of 4.06 and an average ACT composite of 30.0, while the honors peers had an average four-point high school GPA of 4.03 and an average ACT composite of 29.3. In contrast, the honors members had higher GPAs at the end of the first year (3.46 versus 3.34) and at the time of graduation (3.52 versus 3.46) than the comparison group of honors peers ($p \leq .05$ in a two-tailed test). That difference suggests that

specific components of the honors program had a positive impact on the students' academic accomplishments. This possibility led to further research that has become the basis for the main study presented herein, with the goal of determining which components of the honors program led to an increase in academic success.

Main Study Design

The sample for the main study was the same group of 3,332 students from the preliminary study who accepted membership in the honors program in the fall semesters of 2013 through 2016. Entering honors students fell into four different groups: (1) students who lived in first-year honors housing; (2) students who participated in the Honors Primetime program; (3) students who did both; and (4) honors students who did neither. We then compared these four to one another on four separate outcome measures of academic success: (1) grade point at the end of the first academic year; (2) completion of 12 or more hours of honors coursework;¹ (3) completion of the honors program requirements and University Honors graduation; and (4) GPA at graduation. Only the fall 2013–fall 2015 entering honors cohorts ($n = 2,610$) were evaluated for the 12-hour completion outcome.

To evaluate the effects of honors housing and Honors Primetime on the two GPA variables, we used hierarchical linear regression analysis in order to determine which variables have the greatest effects. To evaluate the effects on the two binary variables (where 0 = did not complete the coursework or did not graduate with honors, respectively) we used logistic regression. These analyses control for the variables considered when looking at GPA outcomes: sex, first-generation status, ACT composite (or converted SAT score), high school GPA (four-point scale), and the student's college at entry. Since the data were current through the end of the spring 2017 semester, we used only the fall 2013 through fall 2015 cohorts ($n = 2,604$). Awarding of university honors occurs at graduation. This fact limited the cases that could be used to just those students who started in fall 2013 and had earned an undergraduate degree at the university by spring 2017 ($n = 578$).

Additional factors, such as which college a student entered, are likely to influence these outcomes. We therefore also included variables that could be accessed for the whole sample to determine whether these first-year experiences had unique effects on an outcome after controlling for other possible correlates. We used multiple linear regression to control for first-generation status (a binary variable where 0 = not a first-generation student), sex (a binary variable where 0 = male), ACT composite score, high school four-point GPA, and the student's primary college in the first year (measured as a set of five dummy variables). All four cohorts were analyzed for GPA after the first year; only those students who had graduated by spring 2017 were analyzed for GPA at graduation.

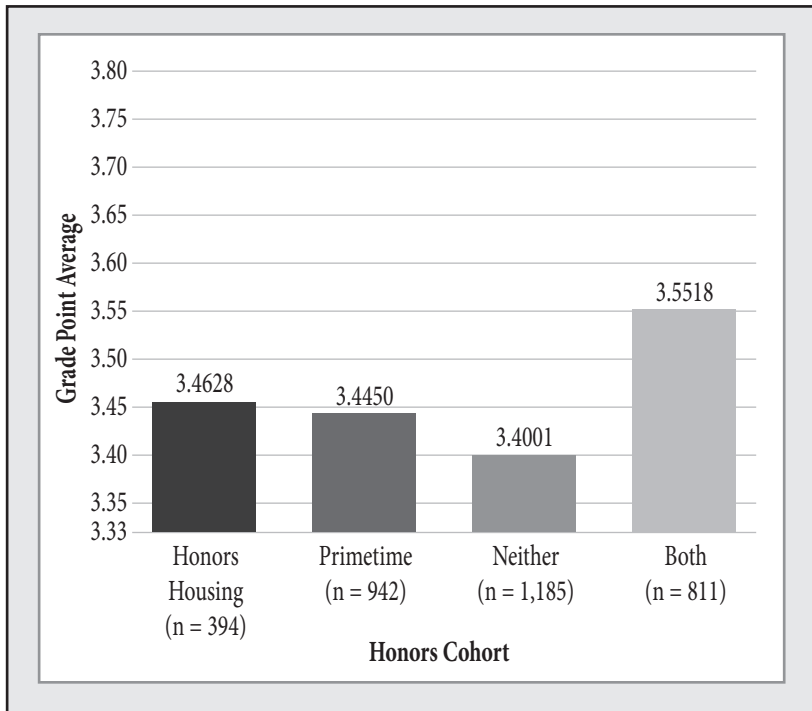
We ran regression models for each of the two GPA outcomes by adding in the binary independent variables of interest: honors residence, Primetime participation, and students who participated in both opportunities (where 0 = did not participate/apply for each of the three variables). Because of collinearity, which occurs when independent variables show too much correlation, isolating unique effects in statistical models can be difficult. To mitigate this concern, we used two models for each of the two GPA outcomes: one model with honors residence and Primetime participation present as distinct binary variables, and one model with the binary variable indicating the presence of both opportunities. The former model's variables could include students who did either one of the first-year experiences as well as students who did both, while the latter model includes a variable that only indicates participating in both first-year experiences.

We also collected qualitative feedback from Primetime participants via a survey. Specifically, we sent a survey to each participant within two weeks of the completion of the course. This survey included questions to gauge satisfaction with the specific workshop and instructor a student was assigned to as well as general questions about the Primetime experience and programming. The completion rate of the survey was very high: an average of 80 percent of Primetime participants across the years completed the survey.

RESULTS

The results suggested that honors housing and Honors Primetime did affect the academic performance of the honors students. Figure 1 shows the average GPAs of the four distinct honors cohorts at the end of the first academic year. Students who took part in Primetime but did not reside in honors housing and students who lived in honors housing but did not participate in Primetime had slightly higher GPAs at the end of their first year than honors students who did neither. The students who had the strongest academic start were those who both took part in Primetime and lived in honors housing. Specifically, they had significantly higher GPAs at the end of the first year than students who only took part in Primetime or only lived in honors housing as well as higher GPAs than

FIGURE 1. GRADE POINT AVERAGE AT THE END OF THE FIRST ACADEMIC YEAR FOR HONORS COHORTS

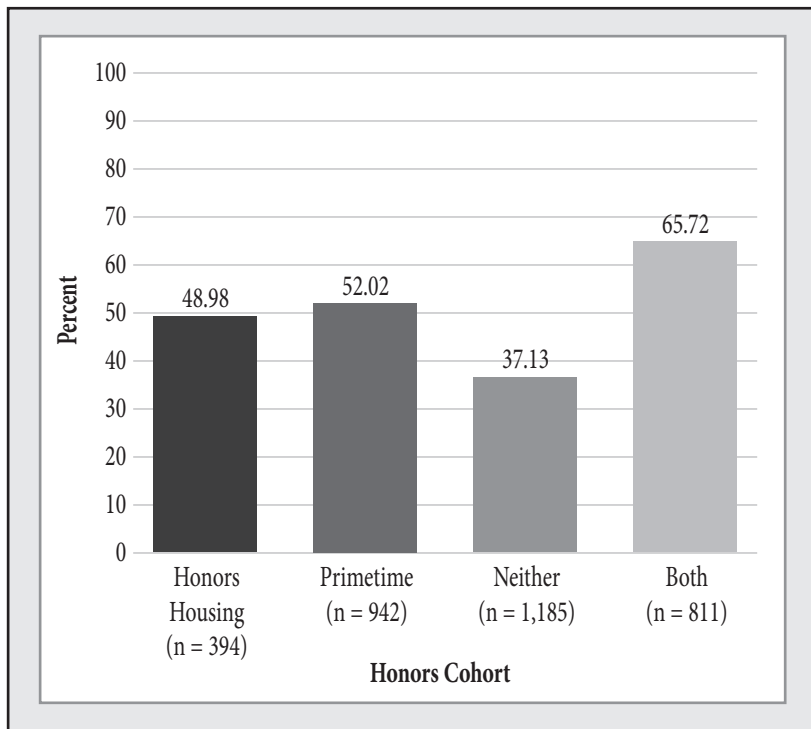


Note: The 3.33 baseline for the graph represents the minimum GPA for honors program membership.

students who did neither ($F = 16.442$ and $p \leq .05$). Further testing using Tukey post hoc tests revealed the “both” variable as the only cohort to differ significantly ($p \leq .05$).

Progress in completing the honors coursework requirement of 12 semester hours in the first four semesters also varied among the four honors cohorts. Figure 2 presents the percent of students meeting this milestone for each of the four groups. A greater percentage of students who took part in Primetime or lived in honors housing completed the honors coursework requirement than students who did neither experience. The effects, however, of honors housing or Primetime as isolated variables are not significant (chi-square tests showed no significant association). About half of the students who either took part in Primetime or lived in honors housing completed the honors coursework requirement. The cohort that stood

FIGURE 2. PERCENT OF HONORS STUDENTS MEETING THE COURSEWORK REQUIREMENT FOR UNIVERSITY HONORS



out once again and was significantly more successful than all other cohorts was the one in which the students took part in Primetime and lived in honors housing ($p \leq .05$; a chi-square evaluating the “neither” group demonstrated significance in a negative correlation with completing the honors coursework requirement, with $p \leq .05$). Over 65 percent of this cohort completed their honors coursework requirement, which is a necessary step in graduating with university honors. This represents a nearly 30 percentage point increase in completing the coursework requirement over students who neither took part in Primetime nor lived in honors housing. Indeed, honors students who participated in both Primetime and lived in honors housing were almost twice as likely to complete their honors coursework requirement. As with first-year GPA, participation in both honors experiences markedly affects student academic success.

Participation in both Primetime and honors housing also had significant effects on graduation with University Honors (see Figure 3). A pattern similar to that in Figures 1 and 2 is apparent. Less than one-fourth of the honors students who neither took part in Primetime nor lived in honors housing graduated with University Honors by spring 2017. Students who took part in Primetime or lived in honors housing graduated with University Honors at about a 7 percentage point higher rate, which appears slightly higher but is not significantly different than the students who did neither. The honors cohort that was most successful at completing university honors elected both to take part in Primetime and live in honors housing: over 40 percent of that cohort graduated with University Honors, which was significantly greater than the three other cohorts ($p \leq .05$).

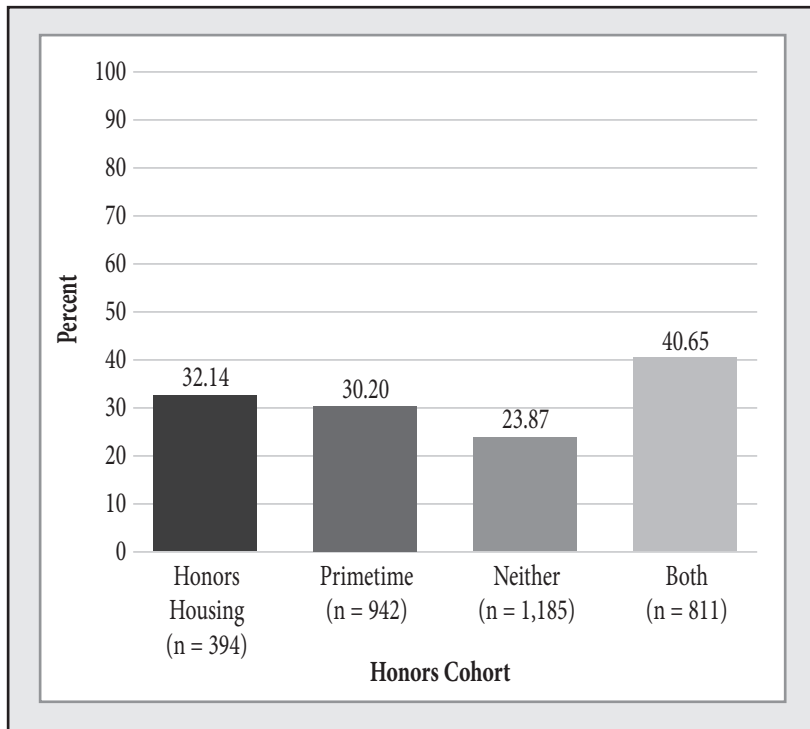
Finally, Figure 4 presents results comparing differences in GPA at graduation. Although fewer than half of the honors students in all four cohorts graduated with university honors, they were all successful in regard to their GPAs at graduation; the average GPA was 3.5 or better for each group. There was no significant difference among the four cohorts.

As noted previously, we used regression statistical analysis to look at the influence of attributes that were intrinsic to the student population, such as sex, ACT score, high school GPA, whether their

parents had earned college degrees, and what college the students entered at matriculation to the university. The three scenarios for the first-year experiences were students who participated in Honors Primetime (n = 1,754; n = 273 for graduation data points); students who were in honors housing (n = 1,205; n = 207 for data points collected at graduation); and students who both participated in Honors Primetime and lived in first-year honors housing (n = 811; n = 123 for graduates). We employed regression analysis for each of the four outcomes under examination: GPA at the end of the first year; completion of 12 semester hours of honors coursework; GPA at graduation; and graduation with University Honors.

Tables 1 and 2 present a regression model of factors influencing first-year GPA. They show a significant and positive association between first-year GPA and honors residence, female sex, ACT

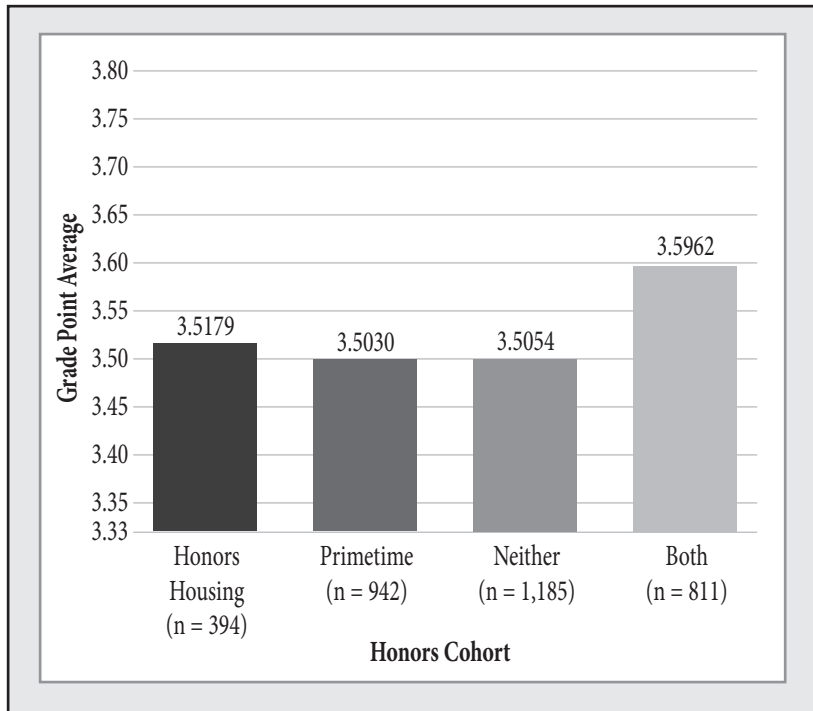
FIGURE 3. PERCENT OF HONORS STUDENTS COMPLETING UNIVERSITY HONORS IN TIME FOR GRADUATION



composite score, and high school four-point GPA ($p \leq .01$). There is a negative correlation with first-year GPA for first-generation status and membership in one of the undergraduate colleges relative to the omitted college we used as a reference group in regression models. Participation in Primetime does not demonstrate a statistically significant association (Table 1). Comparable effects are apparent in the model using the binary variable indicating participation in both Primetime and honors housing (Table 2), with positive correlations for the Primetime and housing combination while controlling for sex, ACT, and high school GPA, and negative correlations for one of the colleges and first-generation status.

Next, we looked at GPA at graduation for those honors students who completed a bachelor’s degree at the university by spring 2017. Tables 3 and 4 present the results of this analysis. By the time of

FIGURE 4. GRADE POINT AVERAGES AT GRADUATION FOR THE FOUR HONORS COHORTS



Note: The 3.33 baseline for the graph represents the minimum GPA for honors program membership.

graduation, only high school four-point GPA and ACT composite have a significant positive effect on college GPA. First-generation status and membership in one of the undergraduate colleges are negatively correlated with GPA at graduation. Neither honors housing nor Primetime participation has a significant impact on GPA at graduation (Table 3).

The combination of both Primetime and honors housing did not demonstrate significance ($p = .083$; see Table 4). This result is the same as in the model considering GPA at graduation with separate housing and Primetime variables. The ACT composite and high school four-point GPA are positively correlated ($p \leq .001$) with GPA at graduation, and first-generation status and participation in one of the undergraduate colleges are negatively correlated ($p \leq .01$).

TABLE 1. LINEAR REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON FIRST-YEAR COLLEGE GPA (PRIMETIME, HONORS HOUSING)

Variable	B	SE	β	t
(Constant)	.369	.156		
First Generation	-.131	.021	-.101	-6.193*
Sex	.067	.017	.069	4.019*
College				
College B	.032	.024	.023	1.350
College C	-.165	.021	-.137	-7.961*
College D	.013	.140	.002	.094
College E	.063	.041	.026	1.553
ACT Composite	.049	.004	.232	13.700*
High School 4-Point GPA	.391	.032	.199	12.067*
Primetime	.025	.016	.026	1.545
Honors Housing	.044	.017	.045	2.656*

* $p \leq .05$

Notes: $N = 3,259$, $F = 59.36$, $p \leq .05$, $R^2 = .155$. The coefficient of determination indicates that the model explains 15.5 percent of the variation in first-year college GPA ($R^2 = .155$). This is only a 0.4 percent improvement in explained variance over the model with all variables except honors housing and Primetime ($R^2 = .151$; results available from the authors upon request).

We evaluated four models using logistic regression: the effects of honors housing and Primetime as two binary variables on each of the binary variables indicating completion of honors coursework and graduation with University Honors and the effects of a single binary variable indicating participation in both first-year experiences on the same two dependent variables. Tables 5 and 6 present results for completion of 12 hours of honors coursework. The model including the two separate housing and Primetime variables (Table 5) did slightly improve fitness over a model excluding these variables. Both honors housing and participation in Primetime demonstrate a positive and significant ($p \leq .05$) correlation with completion of the coursework requirement. Primetime and honors housing produced the second- and third-highest effects on likelihood of completing honors coursework after high school GPA.

A model including the single binary variable indicating participation in both Primetime and honors housing and excluding the two separate variables for these experiences (see Table 6) produced

TABLE 2. LINEAR REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON FIRST-YEAR COLLEGE GPA (BOTH PRIMETIME AND HONORS HOUSING)

Variable	B	SE	β	<i>t</i>
(Constant)	.371	.156		
First Generation	-.132	.021	-.102	-6.228*
Sex	.066	.017	.068	3.970*
College				
College B	.031	.024	.022	1.311
College C	-.166	.021	-.138	-8.004*
College D	.023	.140	.003	.168
College E	.064	.041	.026	1.565
ACT Composite	.050	.004	.234	13.847*
High School 4-Point GPA	.391	.032	.200	12.097*
Both Primetime & Honors Housing	.068	.018	.061	3.712*

* $p \leq .05$

Notes: $N = 3,259$, $F = 66.26$, $p \leq .05$, $R^2 = .155$.

a slightly less improved model, but the odds ratios (i.e., the probability that the two variables are related) suggest a stronger increase in the likelihood of completing honors coursework. Specifically, students participating in both experiences were 2.32 times more likely to complete honors coursework compared to 1.79 times more likely for Primetime alone and 1.65 times more likely for honors housing alone.

Tables 7 and 8 present results for the binary dependent variable indicating graduation with University Honors. The model including the two separate housing and Primetime variables (Table 7) again just slightly improved fitness over a model excluding these variables. Only honors housing demonstrated a significant ($p \leq .05$) correlation with University Honors graduation: students who lived in honors housing were 1.48 times more likely to graduate with

TABLE 3. LINEAR REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON GPA AT GRADUATION (PRIMETIME, HONORS HOUSING)

Variable	B	SE	β	t
(Constant)	1.621	.312		
First Generation	-.110	.041	-.108	-2.657*
Sex	.047	.033	.060	1.412
College				
College B	-.005	.046	-.005	-.111
College C	-.123	.043	-.121	-2.845*
College E	.065	.071	.038	.917
ACT Composite	.027	.007	.163	3.841*
High School 4-Point GPA	.270	.066	.166	4.067*
Primetime	.005	.031	.007	.166
Honors Housing	.043	.032	.055	1.341

* $p \leq .05$

Notes: $N = 578$, $F = 6.64$, $p \leq .05$, $R^2 = .095$. The dummy variable for College D is not present in this model because there were no undergraduate degrees awarded through College D within this population. Assessing Primetime and honors housing separately indicates only a 0.3 percent increase in the explanation of variance in GPA at graduation (from an R^2 of .092 without housing and the Primetime variables to an R^2 of .095 when included).

University Honors. A model including the single binary variable indicating participation in both Primetime and honors housing and excluding the two separate variables for these experiences (see Table 8) again produced a slightly less improved model, and the odds ratios suggest a slightly stronger increase in the likelihood of completing honors coursework (1.56 times more likely, $p \leq .05$).

Results from the qualitative survey feedback shed additional light on these findings regarding Primetime participation. The completion rate was very high, averaging 80 percent across the years of administration, and students were very positive in their responses. For example, about 80 percent of respondents either strongly agreed (42%) or agreed (38%) that their Honors Primetime experience made them feel more confident about beginning their first semester of college, and 92 percent rated their overall Primetime experience as either excellent (38%) or good (54%).

TABLE 4. LINEAR REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON GPA AT GRADUATION (BOTH PRIMETIME AND HONORS HOUSING)

Variable	B	SE	β	<i>t</i>
(Constant)	1.631	.311		
First Generation	-.108	.041	-.106	-2.624*
Sex	.044	.033	.056	1.329
College				
<i>College B</i>	-.005	.046	-.004	-.101
<i>College C</i>	-.123	.043	-.120	-2.843*
<i>College E</i>	.067	.070	.039	.959
ACT Composite	.027	.007	.159	3.794*
High School 4-Point GPA	.272	.066	.168	4.115*
Both Primetime & Honors Housing	.065	.037	.070	1.737

* $p \leq .05$

Notes: N = 578, F = 7.63, $p \leq .05$, $R^2 = .097$. The dummy variable for College D is not present in this model because there were no undergraduate degrees awarded through College D within this population. A regression model using the binary variable indicating participation in both Primetime and honors housing demonstrates only a 0.5 percent higher explanation of variance ($R^2 = .097$).

DISCUSSION

The results of our preliminary study of entering honors students and comparable honors peers strongly suggested that the honors experience has a positive effect on student success as measured by GPA at the end of the first year and GPA at the time of graduation. Because the comparison group of honors peers was so similar to the group of honors students, it appears likely that specific components of the honors experience have had a positive impact on students' academic success. The results of the preliminary study prompted us to conduct the research presented in the main study, with its goal being to identify specific components of the honors program experience that contribute to an increase in honors students' academic success.

The main study considered two specific honors experiences, both of which occur during the first year: honors housing and a

TABLE 5. LOGISTIC REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON HONORS COURSEWORK COMPLETION (PRIMETIME, HONORS HOUSING)

Variable	B	SE	Odds Ratio
(Constant)	-9.214	.885	
First Generation	-.346	.113	.707*
Sex	.311	.090	1.364*
College			
<i>College B</i>	-.230	.124	.795
<i>College C</i>	-.419	.113	.658*
<i>College E</i>	-.708	.217	.493*
ACT Composite	.140	.019	1.150*
High School 4-Point GPA	1.121	.178	3.069*
Primetime	.583	.084	1.792*
Honors Housing	.503	.090	1.653*

* $p \leq .05$

Notes: $N = 2,610$, $p \leq .05$, Nagelkerke $R^2 = .139$. The dummy variable for College D is not present in the cases used for this model. The two separate housing and Primetime variables shown in this table did slightly improve fitness over a model excluding these variables (the Nagelkerke R^2 increased from .093 to .139, and classification improved from 61.3% to 63.2%).

pre-semester, credit-bearing class titled Honors Primetime. The data indicate that honors housing and Honors Primetime combined have a significant impact on the academic success of students in three of the four measures of student success we analyzed, as does living in honors housing as a separate variable. Although Primetime participation only showed effects in coursework completion, a magnified effect on the success measures occurred when students participated in both opportunities. The study did not control for any selection bias: that is, students who choose honors housing and Primetime are likely not equivalent to students who do not. Controlling for a selection bias would necessitate a random assignment of honors students to honors residence halls, which was not possible for this study. Yet, even without the control for a selection bias, the close nature of the comparison groups—honors students who chose to participate in honors housing and Primetime as compared to honors student who did not—suggests that these two first-year honors experiences added value to the students’ undergraduate experience.

TABLE 6. LOGISTIC REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON HONORS COURSEWORK COMPLETION (BOTH PRIMETIME AND HONORS HOUSING)

Variable	B	SE	Odds Ratio
(Constant)	-9.193	.881	
First Generation	-.348	.112	.706*
Sex	.321	.089	1.379*
College			
College B	-.239	.123	.787
College C	-.429	.112	.651*
College E	-.684	.215	.504*
ACT Composite	.147	.019	1.158*
High School 4-Point GPA	1.132	.177	3.103*
Both Primetime & Honors Housing	.841	.104	2.319*

* $p \leq .05$

Note: $N = 2,610$, $p \leq .05$, Nagelkerke $R^2 = .125$. The dummy variable for College D is not present in the cases used for this model.

Certainly, other factors, such as high school GPA and ACT/SAT scores, also affect academic success to varying degrees. For example, Campbell and Fuqua (2008) attempted to identify factors that were potential predictors of completion in their honors program, and they found that first-year GPA was most predictive, followed by honors housing. For that reason, this study also considered other factors that inform student success, such as high school GPA and ACT/SAT scores. The data in the study indicated that honors housing and Primetime still had a significant influence on student success, although other attributes, as would be expected, had a stronger influence. Such specific data on what enables student success allow honors programs to tailor the honors experience so that it better enables and benefits their particular student populations.

Regarding the potential for added value of honors housing, prior research shows a positive effect of residence halls and in

TABLE 7. LOGISTIC REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON GRADUATING WITH UNIVERSITY HONORS (PRIMETIME, HONORS HOUSING)

Variable	B	SE	Odds Ratio
(Constant)	-9.883	2.039	
First Generation	-.285	.275	.752
Sex	.540	.214	1.716*
College			
College B	-.828	.342	.437*
College C	.110	.260	1.116
College E	-.424	.449	.654
ACT Composite	.200	.045	1.221*
High School 4-Point GPA	.648	.414	1.913
Primetime	.209	.196	1.232
Honors Housing	.392	.198	1.480*

* $p \leq .05$

Notes: $N = 578$, $p \leq .05$, Nagelkerke $R^2 = .123$. The dummy variable for College D is not present in the cases used for this model. Including the two separate housing and Primetime variables, as shown in this table, again just slightly improved fitness over a model excluding these variables (the Nagelkerke R^2 increased from .109 to .123, and classification improved from 69.7% to 71.1%).

particular living-learning communities on student academic success (see Rinn 2004 for a review of the literature). Our findings suggest that honors housing in particular has an effect on student academic success above and beyond that of non-honors housing.

As for Honors Primetime, its effect on student success was nearly equal to that of honors housing, and it was both popular and highly praised by its participants in the survey comments. This result contrasts in part to the findings of Perrine and Spain (2008), who saw that although participants in their optional six-day, pre-semester orientation program indicated via survey results that the experience helped with their academic and social adjustment to college, the data suggested that the orientation program had little effect on retention, credits earned, and GPA. Worth noting, however, is that their orientation program was neither academic nor credit-bearing, as is Honors Primetime at the University of Iowa.

TABLE 8. LOGISTIC REGRESSION MODEL OF THE IMPACT OF INDEPENDENT AND CONTROL VARIABLES ON GRADUATING WITH UNIVERSITY HONORS (BOTH PRIMETIME AND HONORS HOUSING)

Variable	B	SE	Odds Ratio
(Constant)	-9.816	2.024	
First Generation	-.285	.275	.752
Sex	.524	.213	1.689*
College			
College B	-.834	.341	.434*
College C	.095	.259	1.100
College E	-.459	.443	.632
ACT Composite	.201	.045	1.223*
High School 4-Point GPA	.662	.413	1.938
Both Primetime & Honors Housing	.442	.223	1.556*

* $p \leq .05$

Notes: N = 578, $p \leq .05$, Nagelkerke $R^2 = .118$. The dummy variable for College D is not present in the cases used for this model. Including the single binary variable indicating participation in both Primetime and honors housing while excluding the two separate variables for these experiences, as shown in this table, did not improve the model (Nagelkerke $R^2 = .118$; classification = 70.6%).

As Perrine and Spain (2008) note, freshman orientation programs in general are based on Vincent Tinto's (1975) widely accepted concept of retention: that students' feelings of connectedness or their social integration into the campus community increase their commitment to the institution, and they are more likely to graduate. Yet, as Perrine and Spain (2008) again note, the evidence that orientation programs actually increase retention "is scarce and methodologically flawed," and those studies that are methodologically sound have shown mixed results (p. 156). It could be that orientation-like experiences benefit students in ways that are not normally tracked, such as their effect on alleviating the anxiety associated with transitioning into the university. Additionally, judging from comments generated by Honors Primetime, students are forming meaningful and lasting social relationships during the four-day experience. They are also getting to know faculty, the honors staff, and the campus better than their honors peers who do not take Primetime. Such benefits may not always show themselves through GPAs, engagement in the program, and persistence, and yet they may well be valuable to students in other ways such as mental health. Finally, worth noting is the value experiences such as Primetime provide an honors program: a way to engage university faculty with honors students and the honors program as one of the twenty or so instructors of Primetime workshops. The results suggest that unique programmatic experiences that honors programs often offer to honors students add value in terms of improved student outcomes, and thus the findings lend support for honors programs considering whether to offer pre-semester academic experiences.

IMPACT OF THE STUDY

Verifying through data the positive impact of honors housing and Primetime has influenced our program in a number of ways. First, we now promote these opportunities much more strongly to our entering students. While we have not made them requirements, we actively highlight them to our entering students and their families during campus visits and, for Primetime, during summer

orientation for new students. Our professional staff speak about the benefits of honors housing and Primetime, but our honors program student ambassadors—those who have had these specific honors experiences—are our most effective advocates for them. Their personal perspectives on living in Honors House or participating in Primetime are most beneficial in getting more of our entering class to select these options.

The second benefit of a demonstrable positive impact of honors housing and Primetime has been in gaining institutional support. Recently, a university committee reviewed living-learning communities on our campus. Sharing the results of our research on the positive effect of living in Honors House on student success clearly influenced the recommendations that the committee made. We have also been able to continue and grow Primetime with funding from the Office of the Provost because of the demonstrated impact on student success and retention in honors. At a time when resource allocation strongly benefits from or even depends upon documented program effectiveness, the results of our study on the impact of Honors House and Primetime on our students' success have greatly benefited the program and our students.

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NOTE

1. Twelve hours of honors coursework constitute half of the required honors curriculum and must be completed by the

student's fourth semester in the program. It is essentially a half-way check-in point.

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