

2002

# A program evaluation of a living-learning housing option at a large midwestern university

Sharon Smith Thompson  
*Iowa State University*

Follow this and additional works at: <https://lib.dr.iastate.edu/rtd>

 Part of the [Educational Psychology Commons](#), and the [Higher Education and Teaching Commons](#)

## Recommended Citation

Thompson, Sharon Smith, "A program evaluation of a living-learning housing option at a large midwestern university" (2002). *Retrospective Theses and Dissertations*. 485.  
<https://lib.dr.iastate.edu/rtd/485>

This Dissertation is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Retrospective Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

## INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

**The quality of this reproduction is dependent upon the quality of the copy submitted.** Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

ProQuest Information and Learning  
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA  
800-521-0600

UMI<sup>®</sup>



**A program evaluation of a living-learning housing option  
at a large midwestern university**

**by**

**Sharon Smith Thompson**

**A dissertation submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
DOCTOR OF PHILOSOPHY**

**Major: Psychology (Counseling Psychology)**

**Program of Study Committee:  
Douglas L. Epperson, Major Professor  
Kathleen Bieschke  
Douglas Bonett  
Lisa Larson  
Florence Hamrick**

**Iowa State University**

**Ames, Iowa**

**2002**

**Copyright © Sharon Smith Thompson, 2002. All rights reserved.**

UMI Number: 3061870

UMI<sup>®</sup>

---

UMI Microform 3061870

Copyright 2002 by ProQuest Information and Learning Company.  
All rights reserved. This microform edition is protected against  
unauthorized copying under Title 17, United States Code.

---

ProQuest Information and Learning Company  
300 North Zeeb Road  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

**Graduate College  
Iowa State University**

**This is to certify that the doctoral dissertation of**

**Sharon Smith Thompson**

**has met the dissertation requirements of Iowa State University**

Signature was redacted for privacy.

**Major Professor**

Signature was redacted for privacy.

**For the Major Program**

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS	v
ABSTRACT	vi
INTRODUCTION	1
Purpose of the Proposed Study	3
Hypotheses	3
REVIEW OF THE LITERATURE	4
Factors Influencing Academic Performance and Persistence	4
Living-Learning Centers	11
METHOD	15
Participants	15
Intervention	16
Procedure	19
Measures	21
Data Analysis	25
Summary of Hypotheses	31
RESULTS	34
Background Comparisons	34
Outcome Analyses	38
DISCUSSION	84
APPENDIX A: BACKGROUND QUESTIONNAIRES	92
APPENDIX B: INFORMED CONSENT STATEMENT	102
APPENDIX C: SPRING SURVEYS	104
APPENDIX D: COVER LETTERS	117
APPENDIX E: RESIDENT REMINDER	120
APPENDIX F: ITEM GROUPINGS FOR ACADEMIC SELF-EFFICACY SCALE	122
APPENDIX G: ITEM GROUPINGS FOR SATISFACTION SCALES	124
APPENDIX H: NON-SIGNIFICANT BACKGROUND VARIABLES – TOTAL SAMPLE	128

APPENDIX I: NON-SIGNIFICANT BACKGROUND VARIABLES – BACKGROUND SURVEY SAMPLE	130
APPENDIX J: NON-SIGNIFICANT BACKGROUND VARIABLES - FINAL SURVEY SAMPLE	134
APPENDIX K: COURSES USED TO CALCULATE COURSE GPAS	138
APPENDIX L: DESCRIPTIVE STATISTICS BY HALL FOR ALL OUCOME VARIABLES	140
REFERENCES	144

## ACKNOWLEDGEMENTS

I would like to thank the Iowa State University Department of Residence for their support of the Maple Hall evaluation and for their generosity in allowing me the use of the data for this dissertation. I would also like to thank Dr. Doug Epperson for his unquestioning support and guidance despite the somewhat unrealistic timeline I set for myself, and Don Whalen for his prompt assistance in the data collection procedures. Furthermore, I'd like to express my appreciation to the Texas Tech University Student Counseling Center for providing me with the time and encouragement to complete this project.

Finally, I would like to thank my husband, Casey, my daughter, Willow, and our extended families for their unwavering support throughout my graduate education. I am especially aware of the many sacrifices Casey has made in his efforts to support and encourage my achievement of this goal. I am also grateful for my daughter's joyfulness, which continually reminds me of what is important in life.

**ABSTRACT**

The present study examined the impact of a living-learning housing option on residents' academic behavior, cognitions (i.e., academic self-efficacy and attributions for academic outcomes), achievement, retention at the university, and level of satisfaction with their living environment. Residents of Maple, the program hall, were compared to residents of Larch, a non-program hall that was similar to Maple in size and location. Background and outcome data were obtained through official university records, as well as through questionnaires completed by residents of both halls at the beginning of the fall semester and toward the end of the spring semester.

The results indicated that the Maple Hall program had a generally positive impact on residents, with the main benefit being the higher retention rate for Maple residents compared to residents of Larch Hall. Other significant findings included higher basic, math, and overall academic self-efficacy, greater satisfaction with hall facilities, and increased time spent attending classes and labs, studying, performing community service, and participating in recreational and social activities (an indicator of involvement in the university community). Although the absence of a consistently significant impact on residents' academic performance is surprising, the overall results of the investigation support the continuation of the Maple Hall program and provide potential directions for future research on this and similar living-learning programs.

## INTRODUCTION

During the 1960s and early 1970s, the traditional residence hall philosophy of providing shelter and monitoring residents' behavior was supplanted by a more educational philosophy that focused on the facilitation of academic and personal development (Williams & Reilley, 1974). As the philosophy shifted and new residence hall programs were introduced, researchers devoted their efforts to assessing the educational and developmental impact of both new and existing programs. The resulting body of research has consistently shown that a student's place of residence does, in fact, influence several facets of his or her personal and academic development (Pascarella & Terenzini, 1980, 1991).

Three of the many dimensions along which various resident environments differ are the degree of student involvement that is encouraged, the extent to which the environment facilitates the integration of a student's academic life and social life, and the composition of the peer group. In research on the broader question of how the college experience affects students, these three factors have consistently been shown to significantly affect academic performance and persistence. For instance, greater involvement in the university is generally cited as an explanation for the fact that on-campus students are more likely than commuter students to persist at the university and complete their degrees (Astin, 1993; Blimling, 1993; Pascarella & Terenzini, 1991). Similarly, research has shown that the more students are integrated into the social and academic systems of an institution, the greater the likelihood that they will persist at that institution (Pascarella & Terenzini, 1980). Regarding the peer group, a number of researchers have asserted that it is the environmental factor that exerts the most influence on student learning and development (e.g., Astin, 1993; Levine, 1994; Schroeder, 1994).

One way that residence hall administrators have sought to take advantage of the potential impact of the three factors just described is through the establishment of living-learning programs in residence facilities. These programs vary considerably from one another but generally include several of the following components: on-site classrooms, special support for freshmen, mentoring by upperclassmen, group study facilities, faculty involvement, and programs designed to match students' study habits and meet their learning needs (Koch, Wesse, & Stickney, 1999).

Several reviews on the academic outcomes of living-learning centers have been published (e.g., Terenzini, Pascarella, & Blimling, 1996; Williams & Reilley, 1974). The results generally indicate that living-learning centers have positive effects on students' academic and intellectual development (Terenzini, et al., 1996), persistence at the university (Pascarella & Terenzini, 1980), and satisfaction with their living environment (Williams & Reilley, 1974).

Cognitions, such as self-efficacy and causal attributions, have also been shown to have a significant impact on academic performance (e.g., Chemers, Hu, & Garcia, 2001; Lane & Lane, 2001; Multon, Brown, & Lent, 1991 for self-efficacy beliefs and Van Overwalle & De Metsenaere, 1990 for attributions) and persistence (e.g., Bouffard-Bouchard, 1990; Lent, Brown, & Larkin, 1984; and Multon et al., 1991 for self-efficacy beliefs and Wilson & Linville, 1982, 1985 for attributions). Although living-learning centers have not generally been designed with the explicit goal of impacting these cognitive variables, it seems plausible that changes in participants' academic self-efficacy and causal attributions are potential mechanisms by which these programs affect academic performance and persistence.

### Purpose of the Proposed Study

During the 1999-2000 academic year, a special program was implemented in the newly renovated Maple Hall residence facility at Iowa State University of Science and Technology. The program relied on staffing and policies that differed from other residence halls on campus in an attempt to create a living-learning community that fostered intellectual and personal growth and provided an atmosphere that was supportive of residents' academic endeavors. The program was aimed primarily at freshman students, but some upperclassmen were also allowed to participate. The primary purpose of this study was to evaluate the program's effects on residents' academic behavior, cognitions, achievement, retention at the university, and level of satisfaction with their living environment.

### Hypotheses

It was hypothesized that, compared to residents of Larch Hall, a similar but non-program hall, participants in the Maple Hall program would report higher expectations for the amount of time to be spent studying (alone and in groups) and participating in community service and leadership activities during the fall semester. Furthermore, at the follow-up assessment, Maple residents were expected to have achieved higher grades, to have been retained at the university at a higher rate, and to have spent more time per week studying (alone and in groups) and participating in community service and leadership activities during the spring semester. It was further hypothesized that Maple residents would report being more satisfied with the staff, facilities, and policies of their residence hall. Finally, compared to residents of Larch Hall, Maple residents were expected to report higher academic self-efficacy scores and to be more likely to attribute academic outcomes to effort (an internal, unstable factor).

## REVIEW OF THE LITERATURE

Modern residence facilities on college and university campuses exhibit some striking differences from their early counterparts. Facilities such as kitchens, study areas, and private bathrooms, which were once thought of as luxuries, are now considered necessities (Koch, et al., 1999). Some services that students now expect, such as internet access and cable television, had not yet been imagined when the earliest residence halls were constructed.

In addition to the differences in architecture and services provided, there have been changes in the way institutions approach the housing of students on campus. During the 1960s and early 1970s, the traditional residence hall philosophy of providing shelter and monitoring residents' behavior gave way to a philosophy of facilitating residents' academic and personal development (Williams & Reilley, 1974). With the new philosophy and resulting residential programs came an interest in assessing the educational and developmental impact of both new and existing programs. This body of research revealed statistically significant relationships between a student's place of residence and variables such as academic achievement, personal development, and college persistence (Pascarella & Terenzini, 1980). These results are not surprising when one considers that approximately 75% of a student's university experience takes place in his or her residential environment (Schroeder & Griffin, 1976).

### Factors Influencing Academic Performance and Persistence

Research on the effects of different living environments and investigations into the effects of the overall college experience have both identified a number of variables that affect academic performance and persistence. These factors include sources of influence such as the degree of student involvement that is encouraged, the extent to which the environment

facilitates the integration of a student's academic life and social life, and the composition of the peer group.

### *Student Involvement*

Student involvement in the university seems to be an important factor affecting academic performance and persistence. For instance, the greater satisfaction and persistence of students who live in residence halls are thought to be due to their greater involvement in campus life (Blimling, 1993; Pascarella & Terenzini, 1991). For example, participants in a residence program that had significant positive effects on both performance and retention were described as having engaged in intramural activities and volunteer services as a group (Schroeder & Griffin, 1976).

Based on national data from several different years, Astin (e.g., 1977, 1993) has repeatedly asserted that active student involvement plays an important role in student learning and educational outcomes. Several of Astin's (1993) statistically significant findings are relevant to variables assessed in this study. For example, the number of hours per week spent studying or doing homework was positively related to nearly all academic outcomes, including retention and GPA. Time spent interacting with faculty outside of class was also positively related to retention and GPA.

In addition, the number of hours per week spent partying was negatively correlated with GPA but was positively associated with retention, as was the number of hours spent socializing with friends. The positive relationship of partying and socializing with retention is speculated to be due to the greater involvement in university life of students who engage in these activities (Astin, 1993).

The largest negative correlation for degree completion within four years was with having a full-time job (Astin, 1993). Working full-time was also negatively associated with GPA. Working part-time off campus showed a similar pattern of negative correlations with degree completion and GPA. Working part-time on campus was actually positively associated with degree completion, perhaps because it facilitates engagement in the campus community. Finally, participation in volunteer work had a weak, positive association with degree attainment (Astin, 1993).

### *Integration of Social Life and Academic Life*

Research has indicated that academic and nonacademic experiences exert both separate and joint influences on student learning (Terenzini, Springer, Pascarella, & Nora, 1995). In fact, the authors of one review indicated that “the more complete the integration between a student’s academic life and social life during college, the greater the likelihood of his or her general cognitive and intellectual growth.” (Pascarella & Terenzini, 1991, p. 159). These reviewers added that residents exposed to successfully implemented programs that have been designed to facilitate this integration of academic and nonacademic experiences achieve greater gains in cognitive growth and are more likely to persist at the university (Pascarella & Terenzini, 1991). For example, one study reported the impact of an experimental residence hall program for freshmen that was designed to “create a residence hall environment well integrated with the academic life of the university” and to “attempt to blend social, cultural, and academic activities” (Pascarella & Terenzini, 1981, p. 149). Participants in the program achieved significantly higher GPAs, were more likely to continue into their sophomore year, and had significantly more positive attitudes toward their academic program.

### *Peer Group*

The evidence on the effects of peer groups has led researchers to describe them as “the single most potent source of influence” on students (Astin, 1993, p. 398) and as “primary agents in promoting student learning and personal development” (Schroeder, 1994, p.166). Research indicates that students learn from one another what is important, how to define success, and how to behave both academically and socially (Levine, 1994) and suggests that peer groups exert stronger influence on behavior change in college students than do formal academic experiences (Feldman & Newcomb, 1970, as cited in Schroeder & Griffin, 1976).

It seems likely that this interactive learning process is accentuated by the close proximity with peers in residence halls (Blimling, 1993). In fact, researchers have suggested that college and universities can construct residence environments in ways that capitalize on peer group influence (e.g., Levine, 1994; Schroeder & Griffin, 1976). Evidence does indicate that peer groups in residence halls may exert their influence by reinforcing the characteristics by which students were assigned or were self-selected into the group in the first place (Feldman & Newcomb, 1969 in Blimling, 1993). For instance, high ability students assigned to live in close proximity to one another have been shown to perform better academically than high ability students who were randomly assigned (DeCoster, 1968). Assignment by major has also been shown to improve both academic performance (Schroeder & Griffin, 1976; Taylor & Hanson, 1971) and retention in the major (Schroeder & Griffin, 1976) for engineering students.

There is also some evidence that academic achievement is facilitated when the formal and informal group norms of a residence unit are for a serious academic environment

(Pascarella & Terenzini, 1991). For instance, participants in one homogeneous assignment program for high ability students were significantly more likely than non-participants to report being influenced by peers to perform well academically (DeCoster, 1968). Finally, some research indicates that the academic benefits of LLCs may be the indirect result of their influence on participants' interactions with faculty and peers (Pascarella & Terenzini, 1980, 1981; Pascarella, Terenzini, & Blimling, 1994).

### *Academic Cognitions*

#### *Self-Efficacy*

Self-efficacy is a belief in one's ability to successfully perform a task or behavior in order to achieve a desired outcome (Bandura, 1977). The concept has been hypothesized to impact task selection, effort expenditure, perseverance in challenging situations, and level of performance (Multon, et al., 1991). The more specific concept of academic self-efficacy, then, would be confidence in one's ability to perform the tasks necessary in order to achieve desired academic outcomes (usually defined as a specific grade or average). Although it has been measured a variety of ways, academic self-efficacy has consistently been associated with academic performance (e.g., Lane & Lane, 2001; Lent, et al., 1984) and persistence (e.g., Bouffard-Bouchard, 1990; Lent, et al. 1984). In fact, the authors of a meta-analytic review (Multon, et al., 1991) estimated that self-efficacy accounts for approximately 14% of the variance in academic performance and approximately 12% of the variance in academic persistence. Furthermore, academic self-efficacy has been shown to have strong direct and indirect (e.g., through grade goals or academic expectations) effects on academic performance, even when controlling for past achievement levels (Chemers, et al., 2001; Wood & Locke, 1987).

Researchers generally recommend that interventions be designed to increase students' academic self-efficacy as a means of improving performance and persistence (e.g., Betz & Hackett, 1983; Lane & Lane, 2001; Lent et al., 1984). In fact, self-efficacy levels have been successfully manipulated in laboratory studies designed to provide more robust evidence for the relationship between self-efficacy and performance/persistence (e.g., Bouffard-Bouchard, 1990; Cervone & Peake, 1986). Direction for real-world self-efficacy interventions is provided by these laboratory studies and by consideration of the four types of information that Bandura proposed as sources and modifiers of self-efficacy beliefs. These four types of information are as follows: (1) personal performance experiences, (2) vicarious learning or modeling, (3) verbal persuasion, such as encouragement from others, and (4) emotional arousal (e.g., anxiety) associated with task performance (Betz & Hackett, 1983).

#### *Grade Attributions*

Attributions are the causal explanations that individuals ascribe to events or performance outcomes. Attribution theory assumes that people are motivated to understand the causes of events because such understanding renders the world predictable and provides guidance for future behavior (Lewis & Daltroy, 1990). A variety of attributional theories exist, and attributions have been proposed to vary along several dimensions, including locus of causality (i.e., internal vs. external or self vs. powerful others vs. chance), stability, globality, and controllability (Lewis & Daltroy, 1990). Some researchers have proposed specific groupings of attributions. According to Forsyth (1986), the most frequently cited categories may be those proposed by Heider (1958): ability, effort, task difficulty, and luck. Other researchers, however, have replaced the task difficulty explanation with the more general "context" category (e.g., Lefcourt, von Baeyer, Ware, & Cox, 1979). The latter

grouping has been cited as particularly relevant to educational/academic research (Powers, Cool, Gose, & Douglas, 1985).

Several studies have explored the relationship between instinctive (i.e., non-manipulated) attributions and academic performance and/or persistence. For example, although their own investigation failed to find a relationship between attributional style and subsequent GPA, Fazio and Palm (1998) cite other studies that found significant relationships between attributions and subsequent course grades (Pierce & Henry, 1993) or freshman GPA (Peterson & Barrett, 1987). In addition, Forsyth (1986) reviewed several studies that found links between attributions and performance and/or persistence. Furthermore, he noted that, in general, students tend to attribute failure to external causes and success to internal factors. It has been suggested that this pattern may serve short-term, adaptive functions, such as maintenance of one's self-image and impression management (Noel, Forsyth, & Kelley, 1987). In the long run, however, such attributions may be maladaptive inasmuch as they do not promote increased effort, persistence, or help-seeking behavior (Forsyth, 1986; Noel, et al., 1987).

Because both theory and empirical findings (such as those described above) indicate that students' attributions for academic outcomes have the potential to impact future academic behavior, researchers have attempted to manipulate attributions with the hopes of facilitating improvements in performance and/or persistence. The majority of these studies seem to have focused on facilitating attributions of effort (an internal, unstable, controllable factor) in achievement situations (Försterling, 1985). This trend may be due to two factors: (1) attributional theory's prediction that causes perceived to be under one's control should result in increased efforts (Lewis & Daltroy, 1990), ultimately leading to better performance,

and (2) empirical evidence that students with the best performance records tended to focus on the role of effort in determining outcomes (see Forsyth, 1986 for a brief review).

Most attribution retraining studies have, in fact, shown that inducing effort attributions led to increased persistence and/or performance (e.g., Noel, et al., 1987; also see Försterling, 1985 for a review). For example, while it does not seem to work to simply tell college students that insufficient effort or ineffective study strategies were responsible for their poor exam performance (Van Overwalle, 1986 as cited in Van Overwalle & De Metsenaere, 1990), exposing them to testimonials of older students discussing the effects of these factors on their own academic achievement did significantly impact performance, as indicated by GPA (Wilson & Linville, 1982, 1985) or the pass rate for final exams (Van Overwalle & De Metsenaere, 1990). In the former studies (Wilson & Linville, 1982, 1985), students in the treatment group achieved greater improvements in grades and were more likely to remain in college one year following the intervention. In the latter study (Van Overwalle & De Metsenaere, 1990), students who received the attribution manipulation were significantly more likely to pass all exams than students who received no treatment or were exposed to a program designed to teach study skills strategies (which appeared to have no impact on final exam performance).

### Living-Learning Centers

Residence hall administrators have worked to create programs that promote academic achievement, resident satisfaction, student growth and development, and retention at the university. These programs have included tactics such as homogeneous assignment of residents by academic major, ability, or Holland personality type (Blimling, 1993). A more comprehensive approach, which attempts to take advantage of the potentially positive effects

of peer group influence, student involvement, and the integration of academic life and social life, is the living-learning center (LLC). While there is considerable variation among LLCs, they usually include several of the following components: on-site classrooms, special support for freshmen, mentoring by upperclassmen, group study facilities, faculty involvement, and special programming designed to enhance residents' social and academic experiences (Koch et al., 1999).

### *Effects on Academic Performance*

Several reviews of the research on the academic outcomes of LLCs have been published (e.g., Terenzini et al., 1996; Williams & Reilley, 1974). The authors of one of the earliest of these reviews (Williams & Reilley, 1974) concluded that there was not consistent evidence of an academic or cognitive benefit of living-learning residences, but due to the limited extent of the research at the time, their conclusion was based on the results of very few studies. Since their review, considerably more evidence of the academic benefits of LLCs has accumulated. In fact, the authors of two recent reviews have concluded that living in a LLC has positive benefits on most educational outcomes (Blimling, 1993; Pascarella, et al., 1994). These outcomes include measures of cognitive and intellectual development and indicators of academic achievement (e.g., grade point average, Schroeder & Griffin, 1976). In fact, even when aptitude and past achievement are controlled, residents of LLCs perform better academically (Blimling, 1993; Pascarella et al., 1994) and display greater gains on measures of cognitive development (Pascarella & Terenzini, 1991) than students in conventional residence halls.

*Effects on Perception of the College Experience*

The available evidence suggests that living in an LLC increases students' satisfaction with their living environment, as indicated by their scores on measures of perception of the residence hall environment (e.g., McKelfresh, 1980; Schroeder & Griffin, 1976), by their stated intention to return to the hall or to recommend it to incoming freshmen (Williams & Reilley, 1974), or by actual retention in the hall (Schroeder & Griffin, 1976). LLC residents also perceive their living environment as more intellectual or academic and more satisfying socially (e.g., Blimling, 1993; McKelfresh, 1980; Pascarella et al., 1994; Pascarella & Terenzini, 1980). They have also reported being more satisfied with the perceived educational benefits of their living environments (Madson, Kuder, Hartanov, & McKelfresh, 1976).

Residence in an LLC may also affect students' perceptions of the overall university environment. For instance, after controlling for pre-college characteristics, such as academic aptitude, socio-economic status, and academic achievement, one group of researchers found that residents in a LLC "rated the institutional environment significantly stronger in intellectual press and sense of community" (Pascarella & Terenzini, 1991, p. 151). Residents in another study reported that their experience in the LLC helped facilitate their transition from high school to college (Pemberton, 1968 in Williams & Reilley, 1974). Finally, participants in another LLC reported that the residence had a positive impact on their intellectual development and helped them achieve personal educational objectives (Magnarella, 1975).

*Effects on Retention*

Several studies have found that residents in LLCs were retained at the university at significantly higher rates than residents of conventional residence halls (e.g., Blimling, 1993; Madson et al., 1976; Pascarella & Terenzini, 1980; Pascarella & Terenzini, 1981). Studies often only look at retention after one year (e.g., Pascarella & Terenzini, 1980); however, some have used longer follow-up periods. For example, residents of an engineering LLC were found to have higher retention rates in their major (70% vs. 51%) and in their residence hall (50% vs. 26%) two years after the program began (Schroeder & Griffin, 1976). Furthermore, based on the available evidence, the authors of a recent review concluded that residents of LLCs are also more likely to persist and graduate than residents of conventional halls (Pascarella et al., 1994).

## METHOD

### Participants

Participants in the study were the 847 students at Iowa State University of Science and Technology (ISU) who resided in either Maple or Larch residence hall throughout the 2000-2001 academic year. Residents of Maple Hall constituted the experimental group while Larch residents served as the control group. The selection of Larch residents as the control group was based on Department of Residence staff's expectation that these students would be most similar to the residents of Maple Hall. This assumption was based, in part, on the similarity of the halls in size and location. Comparisons conducted on the previous cohort indicated that residents of both halls were, in fact, quite similar with respect to various background characteristics. This finding held true for residents in the current sample. Data from the background comparisons are summarized in the Results section.

For the most part, students were self-selected for residence in Larch Hall. Members of the two learning teams that were housed in Larch were assigned to the same floor as other members of their teams. (Learning teams are groups of students, usually with similar academic or career interests, who take classes together and participate in formal study groups with other team members.) All other students who requested assignment to this hall were randomly assigned to a floor within the hall. Some additional students who did not specify a residence hall preference were randomly assigned to Larch Hall. Four hundred thirty-three students resided in Larch throughout the 2000-2001 academic year, with a gender composition of 44.6% female and 55.4% male. Just over half of Larch residents (56.6%) were freshmen, 29.8% were sophomores, 11.3% were juniors, and 3.7% were in or beyond their senior year. The majority of Larch residents (88.7%) were of European American

descent, with 6.2% being African American, and 1.4% being Hispanic. Native Americans and Asian Americans each comprised less than 1% of Larch residents, and 2.8% of residents were identified as “other” or “unknown”.

For entering freshmen and transfer students, assignment practices for Maple Hall were identical to those described above. For returning upperclassmen, however, additional criteria were involved. Former residents of Maple were required to have met all curricular and co-curricular requirements (as described below) during the previous academic year. Upperclassmen who previously resided elsewhere were required to meet the minimum GPA requirement of 2.5. Four hundred fourteen students resided in Maple throughout the 2000-2001 academic year, with nearly equal numbers of male (49.8%) and female (50.2%) residents. Because the Maple Hall program primarily targeted freshman students, nearly three-fourths of residents (73.9%) were freshmen, 19.1% were sophomores, 4.1% were juniors, and 2.9% were in or beyond their senior year. The majority of Maple residents (90.8%) were of European American descent, with 3.6% being Asian American, 1.9% being African American, and 1.7% being Hispanic. Native Americans comprised less than 1% of Maple residents, and 1.7% of residents were identified as “other” or “unknown”.

### Intervention

Maple Hall was designed to be a living-learning community that fostered intellectual and personal growth and provided an atmosphere that was supportive of residents' academic endeavors. It differed from Larch Hall in staffing, physical facilities, and hall policies. Because of its more academic focus, Maple Hall also attracted a larger number of residential learning teams than other halls. During the study year, Maple housed one learning team per floor whereas Larch housed only two within the entire hall. The two halls were similar in

that they each consisted of 8 floors or “houses” with double-loaded corridors, a mezzanine level with social and study areas, and a ground floor housing laundry facilities. Each house had its own student government and served as a separate community within the larger residence hall. (See Kuh, et al., 1991 for a complete description of ISU’s house system.) The halls were situated around a “commons” building comprised of dining facilities, student mailboxes, a convenience store, and social and study areas.

### *Staffing*

Larch Hall staff consisted of a Hall Director and one Resident Assistant (RA) for each floor. Maple Hall staff included a Hall Director, one Community Assistant (CA), and one Academic Resource Coordinator (ARC) for each floor. The CA’s role was similar to that of the traditional RA. The different name reflected the goal of creating a greater sense of community within Maple Hall. The ARC acted as a resource for residents, providing them with information on academic success strategies and helping them connect with campus services, such as tutoring, writing labs, and study skills training.

### *Physical Facilities*

Maple Hall was renovated prior to the 1999-2000 academic year (i.e., one year before the study took place). The new facilities included sinks in each two-person room, bathrooms/showers with more privacy, better insulation for reduced noise levels, and a computer lab, kitchenette, and lounge on each floor. In contrast, Larch had communal bathrooms/showers, no sinks in the rooms, and only one computer lab for residents of all floors to share. Both halls were co-ed. However, Maple alternated male and female floors while houses in Larch were co-educational with male students residing on one wing and female students residing on the other.

## *Policies*

### *Regulations*

In Larch Hall, each floor set its own requirements for visitation by members of the opposite sex, quiet hours, and substance use. The most common policies adopted allowed unrestricted opposite-sex visitation (excluding sleepovers), possession and consumption of alcohol by residents of legal age, and quiet hours between 11 p.m. and 9 a.m. on weekdays and 2 a.m. and 10 a.m. on weekends.

In Maple Hall, no visitors of the opposite sex were allowed in residents' rooms between the hours of 1 a.m. and 9 a.m. on weekdays and between 3 a.m. and 9 a.m. on weekends. Quiet hours were in effect between 11 p.m. and 8 a.m. daily. Maple also had a strict substance-free policy. Residents caught violating the policy were required to move out of the hall.

### *Co-Curricular Requirements*

In addition to the policies described above, Maple residents were expected to fulfill certain co-curricular requirements as a condition of living in the hall. These requirements, which were unique to Maple Hall, fell into four categories: academic, personal development, campus organization involvement, and community involvement.

*Academic.* Maple residents were expected to maintain a 2.5 GPA as a condition of residing in the hall. During the fall semester, residents met monthly with their ARCs to monitor their academic performance and to obtain assistance when necessary. Only one formal meeting with the ARC was required during the spring semester.

*Personal Development.* Maple residents were expected to participate in two personal development activities per semester. In order to encourage individualization, this

requirement was not given a strict definition. Examples of relevant activities include attending a concert, special program, or lecture outside of class.

*Campus Organization Involvement.* Residents could fulfill the campus organization requirement by membership in one of the more than 500 student organizations registered with the Student Activities Center on campus. Holding a student government or leadership position in a residence hall or learning community also counted toward fulfillment of this requirement.

*Community Service.* Maple residents were asked to participate in 4 to 5 hours of community service each semester. The definition of activities counting toward fulfillment of this requirement was flexible and included activities that took place outside the Ames community, such as hometown service projects or Spring Break mission trips.

#### Procedure

During the fall semester residence hall orientations, Maple and Larch RAs and CAs distributed the background questionnaire (see Appendix A), asked their residents to complete it at that time, and collected the completed questionnaires. Three hundred Maple residents (72.5% return rate) and 166 Larch residents (38.3% return rate) completed background questionnaires. These 466 individuals (55% return rate) comprised the background survey sample.

Approximately two-thirds of the way through the spring semester, research assistants attended floor meetings for each floor in each of the residence halls. Residents in attendance at the meetings were given a brief verbal description of the study (see Appendix B) and asked to complete the follow-up questionnaire (see Appendix C) at that time. The follow-up questionnaire assessed residents' satisfaction with the physical facilities, policies, staff, and

overall atmosphere of the residence hall; the amount of time respondents spent engaging in various academic and personal activities; diversity awareness; grade attributions; and academic self-efficacy. An explanatory cover letter (see Appendix D) was attached to the front of each survey, serving as modified informed consent.

Residents who did not complete and return a survey during a floor meeting received a copy of the cover letter and questionnaire in their campus mailboxes. These individuals were asked to complete the survey and return it to the investigators via campus mail or by placing it in the drop box located at the main desk for the Maple-Willow-Larch complex. Individuals who did not return their surveys within two weeks received written reminders (see Appendix E) in their campus mailboxes. In order to encourage residents' participation, individuals who returned a completed survey by the deadline were entered into a prize drawing for a chance to win one of three \$100 gift certificates for the local shopping mall.

A total of 307 individuals (36.2% return rate) returned completed follow-up questionnaires. Two hundred one were residents of Maple (48.6% return rate), and 106 were residents of Larch (24.5% return rate). Of these 307 individuals, 228 had also completed the background survey. These individuals (26.9% return rate for both surveys) comprised the final survey sample. Of these respondents, 163 (39.4% return rate) were residents of Maple and 65 (15% return rate) were Larch residents. Additional demographic and background information for each of the samples is reported in the Results section.

## Measures

### *Background Variables*

#### *Background Questionnaire*

**Demographics.** The initial background questionnaire (see Appendix A) requested demographic information, such as age, ethnicity, classification year, and academic major for the purposes of comparing the experimental and control groups. Additional information was gathered on family of origin and educational background.

**Expected Time Allocation.** Respondents were asked to estimate the number of hours per week they expected to spend in various activities of the typical student, including attending classes and labs, studying (alone and in groups), engaging in recreational/social activities, talking with instructors or advisors, fulfilling leadership roles, performing community service, and working for pay.

**Grade Attributions.** Respondents' typical attributions for course and exam grades were assessed by four questions. Two items presented examples of academic success experiences (e.g., "acing" an exam) and two presented examples of failure experiences (e.g., receiving a poor grade). For each scenario described, respondents were asked to identify whether they usually believe the outcome is mainly due to ability (an internal, stable attribution), effort (an internal, unstable attribution), context (i.e., the instructor's teaching or grading style—an external, stable attribution) or luck (an external, unstable attribution). Scores were computed for each of the four attribution styles for success experiences and also for failure experiences, resulting in 8 attribution subscores.

**Academic Self-Efficacy.** Similar to the method introduced by Betz and Hackett (1983), respondents used a 9-point Likert-type scale (1 = no confidence, 9 = complete

confidence) to rate their confidence in their ability to complete each of a list of 21 courses with a grade of “B” or better. The courses listed represented math, science, and core academic courses.

For the purpose of data analysis, the 21-item academic self-efficacy scale was broken down into subscales for basic academic (core courses), math, and science self-efficacy (see Appendix F). Data from Maple, Willow, and Larch Hall residents from the previous academic year yielded an internal consistency of .95 ( $n = 245$ ) for the 21-item scale, .91 ( $n = 261$ ) for the 9-item basic academic self-efficacy subscale, and .92 ( $n = 256$ ) and .86 ( $n = 262$ ), respectively for the 6-item math and 4-item science self-efficacy subscales. When looking at the background sample for the current study, the results were quite similar to the previous year’s data, with internal consistencies of .95 ( $n = 447$ ), .91 ( $n = 452$ ), .91 ( $n = 462$ ), and .87 ( $n = 464$ ) for the overall, basic, math, and science self-efficacy scales, respectively. For the final sample, however, the numbers were slightly lower with internal consistencies of .94 ( $n = 217$ ), .89 ( $n = 220$ ), .87 ( $n = 224$ ), and .87 ( $n = 226$ ) for the overall, basic, math, and science self-efficacy scales, respectively.

### *Registrar’s Records*

*Demographic Information.* Because not all residents completed background questionnaires and not all respondents answered each item, some demographic information was obtained through official university records. These variables included gender, ethnicity, and classification year.

*Academic Aptitude.* American College Testing (ACT) exam composite scores were obtained from the records of the Registrar’s Office to serve as a measure of aptitude. ACT-

Composite scores (ACT-C) for a 2000 person sample studied during 1984 through 1986 yielded a KR20 coefficient of .96 (American College Testing Program, 1988).

*Academic Achievement.* High school percentile rank was also obtained from the records of the Registrar's Office. This information served as an indicator of past academic achievement.

### *Outcome Variables*

#### *Follow-Up Questionnaire*

*Academic Behavior.* The follow-up questionnaire (see Appendix C) asked respondents to estimate the amount of time they actually spent attending classes and labs, studying (alone and in groups), engaging in recreational/social activities, talking with instructors or advisors, fulfilling leadership roles, performing community service, and working for pay.

*Satisfaction with Living Environment.* Using 5-point Likert-type scales, respondents were asked to rate their satisfaction with various aspects of their residence hall experience. Areas assessed included visitation, quiet hours, and substance use policies as well as physical facilities, including furniture, study areas, and computer labs. Additional questions assessed the degree to which respondents viewed the physical facilities and policies of their hall as contributing to the creation of an academically supportive environment and the development of a sense of community within the hall. In addition, residents were asked to indicate their degree of satisfaction with their CA or RA, their HD, and their ARC (Maple residents only). They also rated how well their floor staff (i.e., CA or RA and ARC) performed the various duties of their respective positions.

Similar items were combined to create scales for satisfaction with policies, satisfaction with facilities, and satisfaction with staff (see Appendix G). Results from the final survey sample yielded internal consistencies of .78 ( $n = 227$ ) for the 5-item satisfaction with policies scale, .82 ( $n = 227$ ) for the 7-item satisfaction with facilities scale, and .91 ( $n = 223$ ) for the satisfaction with staff scale.

*Repeated Measures.* The grade attribution and academic self-efficacy scales were repeated in the follow-up questionnaire. Fall scores were used as covariates in the outcome analyses (i.e., comparison of spring scores) for each scale.

#### *Registrar's Records*

*Retention.* Retention at the university was defined as being registered on the tenth class day of the fall semester following the study year (i.e., fall 2001). This information was determined through the records of the Registrar's Office.

*Academic Performance.* GPA for the fall semester of 2000 and for the 2000-2001 academic year served as indicators of academic achievement. Because GPA may be somewhat affected by the difficulty level of an individual's course load for a given semester, between-hall comparisons were also conducted for a course GPA that was based on grades achieved in specific core courses. Courses selected were dependent upon the number of students enrolled and included basic courses such as First Year Composition, Introductory Biology, Introduction to Philosophy, Introduction to Psychology, and entry-level math. Grades received in individual first-year courses also served as indicators of academic performance.

## Data Analysis

### *Preliminary Analyses*

In order to determine the need for the use of covariates in outcome analyses, background data, obtained through official university records and the background survey, were examined for potential differences between halls. These analyses were completed for each of the three samples (background survey, final survey, and total). Chi-square analyses were used for categorical variables and t-tests were used for continuous variables. For variables on which differences emerged, descriptive and test statistics are reported in the Results section. Additional descriptive statistics are reported in Appendices H-J for those background variables on which differences between halls did not emerge. Frequencies and percentages are provided for categorical variables while means and standard deviations are reported for continuous variables.

### *Outcome Analyses*

Since approximately three-fourths of Maple residents were freshmen (due to the program's goal of targeting these students), classification year was entered as a fixed factor in all outcome analyses. Gender also served as a fixed factor for all outcome analyses due to some evidence of differential effects of LLCs (e.g., DeCoster, 1968) and attributional retraining interventions (e.g., Wilson & Linville, 1985) by gender and to consistent evidence of gender differences in self-efficacy beliefs (e.g., Betz & Hackett, 1983; Cervone & Peake, 1986). Covariates used were relevant background variables for which significant differences were found between Maple and Larch residents in the applicable sample. Descriptive statistics for all outcome variables are reported in Appendix L.

*Assessment of Early Program Impact on Expectations*

Participants completed the background questionnaire as part of their orientation to the residence hall during the first week of the fall semester. During this orientation, hall staff reviewed the policies and expectations for each hall. Consequently, Maple residents were informed that they would be expected to maintain a 2.5 GPA, to participate in 2 personal development activities and 4 to 5 hours of community service each semester, and to be involved in a campus organization or hold a student government or residence hall leadership position. As a consequence of receiving this orientation message, Maple residents were predicted to report different expectations than Larch residents for how they would spend their time during the fall semester. Specifically, it was anticipated that Maple residents would expect to spend more time studying (alone and in groups, due to the GPA requirement), performing community service or volunteer work (due to the community service requirement), and fulfilling leadership roles (due to the campus involvement requirement).

In order to test these hypotheses and to explore the possibility of differences on other time allocation variables, between-hall comparisons were made for residents' responses to items asking them to estimate the amount of time they expected to spend per week on various activities during the fall semester. Three-Way Analyses of Covariance, blocking on hall, classification year, and gender, were used for these analyses. The number of high school service experiences completed, the size of the student's high school graduating class, and the size of the student's hometown served as covariates. All residents in the background survey sample were included in the analyses for all items for which they provided valid responses.

### *Academic Performance*

Considering the established relationship between LLCs and academic performance, Maple residents were expected to achieve higher grades than Larch residents. In order to investigate this hypothesis, mean GPAs for Maple and Larch residents were compared for both the fall semester of 2000 and the overall 2000-2001 academic year. In addition, because a student's semester or year GPA may be affected by the difficulty of his or her course load for that time period, an additional GPA was computed for each Maple and Larch resident based on his or her performance in basic core courses. Finally, comparisons were made between Maple and Larch freshman residents' mean scores in each of seven courses typically taken during the freshman year. (See appendix K for a list of the courses selected for the course GPA and individual course grade analyses.)

Three-Way Analyses of Variance, blocking on hall, classification year, and gender were used to test the hypotheses that Maple residents would achieve higher GPAs than Larch residents for the fall semester, academic year, and specific core courses and that Maple freshman residents would achieve higher grades in each of several first-year courses. Covariates were not utilized due to the fact that no significant between-hall differences (other than classification year) emerged during analysis of the background data for the total sample. For fall and year GPAs, all residents in the total sample were used in the analyses, with the exception of the few individuals for whom the Registrar's Office did not have complete grade data ( $n = 5$  for fall,  $n = 2$  for year). The analysis for the course GPA included all individuals ( $n = 702$ ) who had received a grade in at least one of the courses selected for inclusion, and the analysis for each first-year course included all freshman residents who had received a grade in that course.

*Retention*

Because LLCs have consistently been demonstrated to improve student retention rates, it was predicted that Maple residents would be retained at the university at a higher rate than Larch residents. For the purposes of this study, retention was defined as registration on the tenth class day of the fall semester following the study year (i.e., fall 2001). Logistic regression was used to test for effects of the Maple Hall program on the dichotomous variable of retention at the university. Although between-hall differences on high school rank and ACT-C score were not found during background comparisons, these variables were used as covariates due to the strong likelihood of their being associated with retention. All residents in the total sample were included in this analysis.

*Time Allocation*

Similar to predictions about residents' reports of how they expected to spend their time during the fall semester, it was anticipated that Maple and Larch residents would differ in their reports of how they actually spent their time during the spring semester. Specifically, Maple residents were expected to report having spent more time studying (alone and in groups, due to the GPA requirement), performing community service or volunteer work (due to the community service requirement), and fulfilling leadership roles (due to the campus involvement requirement).

In order to test these hypotheses and to explore the possibility of differences on other time allocation variables, between-hall comparisons were made for residents' responses to items asking them to estimate the amount of time they had spent per week on various activities during the spring semester. Three-Way Analyses of Covariance, blocking on hall, classification year, and gender, were used for these comparisons. Covariates used were

relevant background variables for which significant differences were found between Maple and Larch residents in the final survey sample. These variables were the number of high school service experiences, ACT-C score, and the degree to which the student felt prepared for college by his or her high school. All residents in the final survey sample were included in the analysis of each time allocation item for which they provided a valid response.

### *Resident Satisfaction*

Due to the recent renovations in the hall and to the addition of a staff member designated to assist residents with their academic development, it was predicted that Maple residents would report being more satisfied than Larch residents with their hall's facilities and staff. Furthermore, because Maple Hall's visitation, quiet hours, and substance use policies were designed to facilitate a more academically-focused atmosphere in the hall, Maple was expected to attract students who were interested in such a living environment. Therefore, Maple residents were expected to report greater satisfaction than Larch residents with their hall's policies.

Three-Way Analyses of Covariance, blocking on hall, classification year, and gender, were used to test these hypotheses. No covariates were used since no relevant variables yielded significant between-hall differences during background comparisons. All residents in the final survey sample who provided valid responses for a scale were included in the analysis for that scale.

### *Academic Cognitions*

*Self-Efficacy.* Due to Maple's more academic focus (compared to traditional residence halls, including Larch), its goals of positively impacting participants' scholastic achievement and persistence, and the presence of ARCs whose primary job duty was to assist

residents with their academic development and achievement, it seemed plausible that Maple residents would receive more consistent and explicit information from at least three of the four sources (i.e., performance accomplishments, vicarious learning, verbal persuasion, emotional arousal) on which self-efficacy beliefs are proposed to be based. For instance, it is likely that participants were more closely monitoring their own performance accomplishments due to the GPA requirement and the regular meetings with the ARC. At the meetings with the ARC, residents (theoretically) encountered verbal persuasion information in the form of encouragement and positive feedback for efforts made. Furthermore, it seems that living in a hall in which many or most residents were striving for academic success would provide students with ample opportunities for vicarious learning or modeling. Therefore, Maple residents were expected to exhibit higher academic self-efficacy than Larch residents at the follow-up assessment.

*Grade Attributions.* Although the program was not specifically designed to impact residents' grade attributions, due to the structure of the program, it is likely that Maple residents received significantly more messages than Larch residents about the role of their behavior in academic outcomes. These messages came in the form of personal feedback from the ARC, educational programming related to improving academic success skills, and referrals to resources, such as tutoring and study skills training, that emphasize the role of effort in academic success. As a result of this persistent focus on the relationship between behavior and academic performance, it was hypothesized that Maple residents would be more likely than Larch residents to attribute academic outcomes to effort (an internal, unstable cause).

Three-Way Analyses of Covariance, blocking on hall, classification year, and gender, were used to test for effects of the Maple Hall program on the academic self-efficacy and grade attribution scales. Time 1 scores for each scale served as covariates. Relevant variables for which significant differences emerged during analysis of the background data were also added as covariates. These variables were ACT-C score and the degree to which the student felt prepared for college by his or her high school. All residents in the final survey sample who provided valid responses for a scale were included in the analysis for that scale.

#### Summary of Hypotheses

*Hypothesis 1:* Maple residents will report higher expectations than Larch residents for the amount of time per week to be spent studying alone during the fall semester.

*Hypothesis 2:* Maple residents will report higher expectations than Larch residents for the amount of time per week to be spent studying in groups during the fall semester.

*Hypothesis 3:* Maple residents will report higher expectations than Larch residents for the amount of time per week to be spent participating in community service activities or volunteer work during the fall semester.

*Hypothesis 4:* Maple residents will report higher expectations than Larch residents for the amount of time per week spent in leadership roles for the fall semester.

*Hypothesis 5:* Maple residents will achieve higher GPAs than Larch residents for the fall semester of the study year (i.e., fall 2000).

*Hypothesis 6:* Maple residents will achieve higher GPAs than Larch residents for the study year (i.e., 2000-2001 academic year).

***Hypothesis 7:*** Maple residents will achieve higher GPAs than Larch residents for the basic core courses selected for the study.

***Hypothesis 8:*** Maple residents will be retained at the university at a higher rate than Larch residents.

***Hypothesis 9:*** Maple residents will report having spent more time per week than Larch residents studying alone during the spring semester.

***Hypothesis 10:*** Maple residents will report having spent more time per week than Larch residents studying in groups during the spring semester.

***Hypothesis 11:*** Maple residents will report having spent more time per week than Larch residents participating in community service activities or volunteer work during the spring semester.

***Hypothesis 12:*** Maple residents will report having spent more time per week than Larch residents in leadership roles during the spring semester.

***Hypothesis 13:*** Maple residents will report greater satisfaction than Larch residents with their hall's facilities.

***Hypothesis 14:*** Maple residents will report greater satisfaction than Larch residents with their hall's staff.

***Hypothesis 15:*** Maple residents will report greater satisfaction than Larch residents with their hall's policies.

***Hypothesis 16:*** Maple residents will report greater self-efficacy than Larch residents for successfully completing courses in their major with a grade of "B" or better.

***Hypothesis 17:*** Maple residents will report greater self-efficacy than Larch residents for successfully completing basic core courses with a grade of "B" or better.

***Hypothesis 18:*** Maple residents will report greater self-efficacy than Larch residents for successfully completing math courses with a grade of “B” or better.

***Hypothesis 19:*** Maple residents will report greater self-efficacy than Larch residents for successfully completing science courses with a grade of “B” or better.

***Hypothesis 20:*** Maple residents will report greater self-efficacy than Larch residents for successfully completing a variety of university courses with a grade of “B” or better.

***Hypothesis 21:*** Maple residents will be more likely than Larch residents to attribute academic outcomes to effort (an internal, unstable cause).

## RESULTS

### Background Comparisons

Maple and Larch residents in each sample were compared on background variables in order to assess the similarity of the halls and to determine which variables, if any, should be used as covariates in outcome analyses. Due to small cell sizes, classification year was dichotomized, with all students beyond their freshman year being treated as one group. For the same reason, ethnicity was dichotomized with all individuals who identified as European American comprising one group. All other individuals were treated as the second group. Descriptive statistics for background variables for which significant between-hall differences were not found are reported in Appendices H, I, and J for the total, background survey, and final survey samples, respectively.

#### *Total Sample*

As indicated above, the total sample consisted of all 847 individuals who lived in either Maple ( $n = 414$ ) or Larch ( $n = 433$ ) residence hall throughout the 2000-2001 academic year. This sample was used for those outcome analyses involving variables obtained through official university records (i.e., GPA, course grades, retention). Background information that was available for the total sample included gender, ethnicity, high school rank (a percentile score), ACT-Composite (ACT-C) scores, and classification year.

The only significant difference between Maple and Larch residents in the total sample was on classification year (see Table 1). Within the total sample, a larger percentage of Maple residents were freshmen (74% vs. 57%) and a smaller percentage of Maple residents were beyond their freshman year (26% vs. 43%).

Table 1. Significant Background Comparisons - Total Sample

Classification Year	Maple Hall		Larch Hall		$X^2$	df	p
	n	%	n	%			
Freshman	306	73.9	245	56.6	27.963	1	<.001
Sophomore or beyond	108	26.1	188	43.4			

*Note.* Due to small cell sizes, students in or beyond their 2<sup>nd</sup> year were treated as one group.

#### *Background Survey Sample*

The background survey sample consisted of the 466 individuals (300 Maple residents, 166 Larch residents) who returned the background questionnaire. This sample was used to assess for early impact of the Maple Hall program on residents' expectations. In addition to the demographic information obtained through institutional records, residents were asked to provide additional background data on the fall questionnaire. Questions referred to high school experiences (e.g., size and type of high school and perceived degree of preparation for college), family educational history (i.e., level of education achieved by parents and grandparents), connections to ISU (e.g., number of high school acquaintances at the university and number of close family members who are ISU alumni), educational/academic plans (e.g., expected degree attainment), and diversity experiences (e.g., experience and comfort with diverse cultures).

When Maple and Larch residents in the background survey sample were compared on the variables listed above, several significant differences emerged (see Table 2). For instance, Maple housed a significantly greater percentage of freshmen (79% vs. 55%) and a

Table 2. Significant Background Comparisons - Background Survey Sample

<b>Classification Year<sup>a</sup></b>	<b>Maple Hall</b>		<b>Larch Hall</b>		<b>X<sup>2</sup></b>	<b>df</b>	<b>p</b>
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>			
Freshman	236	78.7	92	55.4	27.703	1	<.001
Sophomore or beyond	64	21.3	74	44.6			
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>t</b>	<b>df</b>	<b>p</b>
<b>Size of Graduating Class<sup>b</sup></b>	2.46	17.1	2.84	1.76	-2.226	330	.027
<b>Hometown Size<sup>c</sup></b>	4.33	1.68	3.77	1.78	3.273	325	.001
<b>Service Experiences<sup>d</sup></b>	3.91	1.27	3.45	1.40	3.552	314	<.001
<b>Comfort Interacting with Diverse People<sup>e</sup></b>	6.49	2.52	7.02	1.92	-2.678	385	.008

<sup>a</sup>Due to small cell sizes, students in or beyond their 2<sup>nd</sup> year were treated as one group.

<sup>b</sup>Represents the approximate size of the respondent's graduating class: 1 = less than 100, 2 = 100-199, 3 = 200-299, 4 = 300-399, 5 = 400-499, 6 = 500-599, 7 = 600-699, 8 = 700 or more.

<sup>c</sup>Represents the population of the community in which the respondent's immediate family lives: 1 = more than 200,000; 2 = 100,000-200,000; 3 = 25,000-100,000; 4 = 10,000-25,000; 5 = less than 10,000; 6 = in the country or on a farm outside of town.

<sup>d</sup>Indicates the number of service experiences completed during high school: 1 = none, 2 = one or two, 3 = three or four, 4 = five or six, 5 = six or more.

<sup>e</sup>9-point scale: 1 = not at all comfortable, 9 = very comfortable.

significantly lower percentage of students beyond their freshman year (21% vs. 45%). Maple residents also reported having had more service experiences during high school than Larch residents (3.91 vs. 3.45 on a 5-point scale). In addition, compared to residents of Larch, Maple residents reported having had fewer students in their graduating classes (2.45 vs. 2.84 on an 8-point scale), being from smaller hometowns (4.33 vs. 3.77 on a 6 point scale, with 6 representing the lowest population), and being less comfortable interacting with people from other cultures or ethnic groups (6.49 vs. 7.02 on a 9-point scale).

#### *Final Survey Sample*

The final survey sample consisted of the 228 individuals (163 Maple residents, 65 Larch residents) who returned both the background and follow-up surveys. This sample was used for those analyses involving information gleaned from the spring survey (i.e., resident satisfaction, spring semester time allocation, grade attributions, and academic self-efficacy). When comparing Larch and Maple residents in the final survey sample to one another on background characteristics, few differences emerged (see Table 3). Larch residents had a higher mean ACT-C score than Maple residents (26.38 vs. 24.89) and reported feeling better prepared for college by their high schools (3.75 vs. 3.50 on a 5-point scale). Maple residents reported having had a greater number of service experiences during high school (3.94 vs. 3.42 on a 5-point scale). In addition, compared to the Larch final sample, the Maple final sample included significantly more freshmen (79% vs. 42%) and significantly fewer students who were beyond their freshman year (22% vs. 59%).

Table 3. Significant Background Comparisons – Final Survey Sample

<b>Classification Year<sup>a</sup></b>	<b>Maple Hall</b>		<b>Larch Hall</b>		<b>X<sup>2</sup></b>	<b>df</b>	<b>p</b>
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>			
Freshman	128	78.5	27	41.5	29.210	1	<.001
Sophomore or beyond	35	21.5	38	58.5			
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>t</b>	<b>df</b>	<b>p</b>
<b>Service Experiences<sup>b</sup></b>	3.94	1.29	3.42	1.40	2.602	110	.011
<b>ACT-C</b>	24.89	4.32	26.38	4.19	-2.259	99	.026
<b>Preparation for College<sup>c</sup></b>	3.50	0.89	3.75	0.85	1.991	122	.049

<sup>a</sup>Due to small cell sizes, students in or beyond their 2<sup>nd</sup> year were treated as one group.

<sup>b</sup>Indicates the number of service experiences during high school: 1 = none, 2 = one or two, 3 = three or four, 4 = five or six, 5 = more than 6.

<sup>c</sup>Represents the extent to which respondent felt prepared for college by his or her high school. 5-point scale: 1 = very poorly, 5 = very well.

### Outcome Analyses

#### *Assessment of Early Program Impact on Expectations*

In order to assess for an early impact of the Maple Hall program on participants' expectations, comparisons were made between Maple and Larch residents' responses to items asking them to estimate (using a 10-point scale) the amount of time they expected to spend each week participating in the following activities: attending classes and labs, studying alone, studying in groups, engaging in recreational and social activities, talking with

instructors outside of class, talking with advisors, fulfilling leadership roles, performing community service or volunteer work, and working for pay. Three-Way Analyses of Covariance were performed to test hypotheses numbers 1-4 (i.e., that Maple residents would expect to spend more time than Larch residents studying alone, studying in groups, fulfilling leadership roles, and performing community service), as well as to provide exploratory analyses of the variables representing the number of hours per week that residents expected to spend attending classes and labs, participating in recreational and social activities, talking with instructors outside of class, talking with advisors, and working for pay. Hall, classification year, and gender were entered as fixed factors, and the three relevant variables for which significant background difference were found (i.e., number of service experiences during high school, size of graduating class, and size of hometown) served as covariates.

#### *Studying Alone*

Hypothesis 1 predicted that due to their awareness of the hall's GPA requirement, Maple residents would expect to spend more time per week than Larch residents studying alone during the fall semester. Contrary to the hypothesis, a significant main effect for hall did not emerge. In fact, there were no significant findings in the analysis of this variable (see Table 4).

#### *Studying in Groups*

Hypothesis 2 predicted that due to their awareness of the hall's GPA requirement, Maple residents would expect to spend more time per week than Larch residents studying in groups during the fall semester. Consistent with this hypothesis, a significant main effect for hall emerged with Maple residents reporting that they expected to spend more time ( $M = 3.24$ ,  $SD = 1.52$ ) than Larch residents ( $M = 2.78$ ,  $SD = 1.67$ ) studying in groups (see Table 5).

Table 4. ANCOVA Results Summary – Expected Time Studying Alone

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	0.543	0.111	.739
Service Experiences	1	16.644	3.403	.066
Size of Hometown	1	0.298	0.061	.805
Hall (H)	1	14.821	3.030	.082
Classification Year (C)	1	5.979	1.222	.269
Gender (G)	1	0.883	0.181	.671
H x C	1	13.324	2.724	.100
H x G	1	1.391	0.284	.594
C x G	1	0.266	0.054	.816
H x C x G	1	0.029	0.006	.938
Error	452	2210.802		

The interaction effects and the main effect for gender were not significant, but the main effect for classification year was. Regardless of hall of residence, freshmen reported expecting to spend significantly more time per week ( $M = 3.21$ ,  $SD = 1.51$ ) than non-freshmen ( $M = 2.76$ ,  $SD = 1.73$ ) studying in groups during the fall semester. The covariate representing the number of service activities performed during high school was also significantly and positively correlated with expected time studying in groups.

#### *Community Service*

Since residents were made aware of the hall's community service requirement before completing the background survey, Hypothesis 3 predicted that Maple residents would report

Table 5. ANCOVA Results Summary – Expected Time Studying in Groups

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	0.131	0.055	.815
Service Experiences	1	26.897	11.253	.001
Size of Hometown	1	2.270	0.950	.330
Hall (H)	1	12.347	5.166	.024
Classification Year (C)	1	11.044	4.620	.032
Gender (G)	1	1.284	0.537	.464
H x C	1	3.211	1.343	.247
H x G	1	0.028	0.012	.913
C x G	1	1.857	0.777	.379
H x C x G	1	0.029	0.012	.912
Error	450	1075.612		

expecting to spend more time per week than Larch residents engaged in community service or volunteer activities. Consistent with this hypothesis, the main effect for hall was significant for the community service variable (see Table 6). The results indicated that Maple residents reported significantly higher expectations ( $M = 2.28$ ,  $SD = 1.56$ ) than Larch residents ( $M = 1.64$ ,  $SD = 1.19$ ) for the amount of time per week they would be devoting to community service activities. The main effect for gender was also significant, with females reporting higher expectations ( $M = 2.21$ ,  $SD = 1.54$ ) than males ( $M = 1.89$ ,  $SD = 1.38$ ). The only other significant finding for this analysis was the positive correlation between number of high school service experiences and expectations for community service.

Table 6. ANCOVA Results Summary – Expected Time in Community Service

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	5.180	2.561	.110
Service Experiences	1	26.104	12.905	<.001
Size of Hometown	1	0.059	0.029	.864
Hall (H)	1	29.528	14.598	<.001
Classification Year (C)	1	0.238	0.118	.732
Gender (G)	1	9.966	4.927	.027
H x C	1	1.563	0.773	.380
H x G	1	2.375	1.174	.279
C x G	1	1.368	0.676	.411
H x C x G	1	1.874	0.926	.336
Error	449	908.222		

### *Leadership Roles*

Because performing leadership roles was one avenue by which Maple residents could meet the hall's campus involvement requirement, Hypothesis 4 predicted that Maple residents would report expecting to spend more time per week than Larch residents fulfilling leadership roles during the fall semester. In support of this hypothesis, a significant main effect for hall did emerge (see Table 7). Maple residents indicated that they expected to spend more time per week ( $M = 2.31$ ,  $SD = 1.38$ ) than Larch residents ( $M = 1.95$ ,  $SD = 1.27$ ) in leadership roles. The main effect for classification year was also significant, with

Table 7. ANCOVA Results Summary – Expected Time in Leadership Roles

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
Size of Graduating Class	1	2.524	1.444	.230
Service Experiences	1	25.633	14.688	<.001
Size of Hometown	1	0.003	0.002	.967
Hall (H)	1	14.395	8.237	.004
Classification Year (C)	1	7.474	4.277	.039
Gender (G)	1	0.016	0.010	.922
H x C	1	0.757	0.433	.511
H x G	1	0.074	0.043	.837
C x G	1	1.075	0.615	.433
H x C x G	1	0.247	0.141	.707
Error	451	788.129		

freshmen reporting lower expectations ( $M = 2.13$ ,  $SD = 1.27$ ) than more advanced students ( $M = 2.32$ ,  $SD = 1.52$ ). The only other significant result of this analysis was the positive correlation of the number of high school service experiences with expectations for leadership activities.

#### *Classes and Labs*

A specific hypothesis was not made concerning resident expectations for the amount of time per week to be spent attending classes and labs. Exploratory comparisons on this variable yielded no significant effects for hall, classification year, gender, or the interaction

terms. The only significant relationship was with the variable representing the size of the respondent's hometown (see Table 8), with individuals from smaller communities reporting higher expectations for the amount of time to be spent in classes and labs.

#### *Recreational/Social Activities*

A specific hypothesis was not made regarding the number of hours per week residents expected to participate in recreational and social activities. The analysis revealed no significant main effects for hall or classification year, but the main effect for gender was significant (see Table 9). Females reported higher expectations ( $M = 4.80, SD = 1.84$ ) than

Table 8. ANCOVA Results Summary – Expected Time in Classes & Labs

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	2.473	0.610	.435
Service Experiences	1	11.280	2.783	.096
Size of Hometown	1	21.073	5.200	.023
Hall (H)	1	0.098	0.024	.877
Classification Year (C)	1	11.323	2.794	.095
Gender (G)	1	3.194	0.788	.375
H x C	1	0.511	0.126	.723
H x G	1	7.201	1.777	.183
C x G	1	0.027	0.007	.935
H x C x G	1	4.731	1.167	.281
Error	450	1823.685		

Table 9. ANCOVA Results Summary – Expected Time in Recreational Activities

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	2.825	0.683	.409
Service Experiences	1	4.252	1.027	.311
Size of Hometown	1	37.387	9.034	.003
Hall (H)	1	2.134	0.516	.473
Classification Year (C)	1	14.270	3.448	.064
Gender (G)	1	23.296	5.629	.018
H x C	1	13.358	3.228	.073
H x G	1	4.382	1.059	.304
C x G	1	3.359	0.812	.368
H x C x G	1	1.066	0.257	.612
Error	448	1854.078		

males ( $M = 4.35$ ,  $SD = 2.27$ ) for the amount of time to be spent in recreational and social activities. There were no significant interaction effects. The hometown size covariate yielded the only other significant effect, with those from smaller towns expecting to spend less time in recreational and social activities.

#### *Talking with Instructors*

Since the Maple Hall program did not contain any components aimed at improving faculty-student relationships, significant between-hall differences were not predicted for the amount of time residents expected to spend each week talking with instructors outside of

class. The only significant result of this comparison was a positive correlation with the number of service experiences completed during high school (see Table 10).

*Talking with Advisors*

Similarly, between-hall differences were not predicted for the number of hours per week residents expected to spend talking with advisors. The main effects for hall and gender were not significant, nor were the interaction effects, but the main effect for classification year was (see Table 11). Not surprisingly, the results indicated that freshmen expected to spend significantly more time per week ( $M = 1.69, SD = 1.06$ ) than more advanced students

Table 10. ANCOVA Results Summary – Expected Time Talking with Instructors

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	4.384	3.843	.051
Service Experiences	1	6.591	5.778	.017
Size of Hometown	1	0.383	0.336	.563
Hall (H)	1	3.202	2.807	.095
Classification Year (C)	1	2.083	21.826	.177
Gender (G)	1	0.318	0.279	.598
H x C	1	3.330	2.920	.088
H x G	1	0.523	0.458	.499
C x G	1	1.581	1.386	.240
H x C x G	1	0.066	0.058	.810
Error	451	514.474		

Table 11. ANCOVA Results Summary – Expected Time Talking with Advisors

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
Size of Graduating Class	1	1.564	1.513	.219
Service Experiences	1	5.873	5.685	.018
Size of Hometown	1	0.036	0.034	.853
Hall (H)	1	0.482	0.467	.495
Classification Year (C)	1	4.057	3.927	.048
Gender (G)	1	0.218	0.211	.646
H x C	1	3.578	3.463	.063
H x G	1	1.999	1.935	.165
C x G	1	1.257	1.217	.271
H x C x G	1	0.265	0.256	.613
Error	451	465.941		

( $M = 1.48$ ,  $SD = 0.93$ ) talking with advisors during the fall semester. The high school service experiences covariate was also significantly and positively associated with expected time talking with advisors.

#### *Working for Pay*

Finally, a between-hall comparison was also performed for the variable representing the amount of time per week residents expected to engage in paid work. A specific hypothesis was not proposed with respect to this variable. The analysis revealed the main effect for classification year as the only significant result (see Table 12). Freshman residents

Table 12. ANCOVA Results Summary – Expected Time Working for Pay

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Size of Graduating Class	1	0.729	0.102	.749
Service Experiences	1	0.729	0.102	.749
Size of Hometown	1	5.497	0.771	.380
Hall (H)	1	4.734	0.664	.416
Classification Year (C)	1	61.727	8.657	.003
Gender (G)	1	0.804	0.113	.737
H x C	1	1.263	0.177	.674
H x G	1	5.963	0.836	.361
C x G	1	22.628	3.174	.076
H x C x G	1	0.012	0.002	.968
Error	449	3201.536		

reported lower expectations ( $M = 2.80$ ,  $SD = 2.57$ ) than more advanced students ( $M = 3.50$ ,  $SD = 2.91$ ) for the amount of time to be spent working for pay during the fall semester.

#### *Academic Performance*

##### *Fall GPA*

Hypothesis 5 predicted that Maple residents would achieve higher GPAs than Larch residents for the fall semester of 2000 (the first semester of the study year). Three-Way Analysis of Variance, blocking on hall, classification year, and gender, was performed to test this hypothesis (see Table 13). Main effects emerged for hall and classification year. The

Table 13. ANOVA Results Summary – Fall GPA

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	2.308	4.005	.046
Classification Year (C)	1	5.664	9.828	.002
Gender (G)	1	0.559	0.969	.325
H x C	1	0.400	0.694	.405
H x G	1	<0.001	0.001	.977
C x G	1	0.077	0.133	.715
H x C x G	1	0.231	0.401	.527
Error	834	480.651		

main effect for gender and the interaction effects were not significant. Consistent with Hypothesis 5, the results indicated that Maple residents achieved higher fall GPAs ( $M = 2.92$ ,  $SD = 0.71$ ) than Larch residents ( $M = 2.85$ ,  $SD = 0.81$ ). In addition, freshmen earned lower fall GPAs ( $M = 2.83$ ,  $SD = 0.76$ ) than students in or beyond their sophomore year ( $M = 2.98$ ,  $SD = 0.76$ ), regardless of hall of residence.

#### *2000-2001 GPA*

Three-Way Analysis of Variance, blocking on hall, classification year, and gender, was performed in order to test Hypothesis 6, which predicted that Maple residents would achieve higher GPAs for the 2000-2001 academic year than Larch residents (see Table 14). Contrary to the hypothesis, the main effect for hall was not significant. The main effect for classification year was significant, with freshmen earning lower GPAs ( $M = 2.84$ ,  $SD = 0.72$ )

Table 14. ANOVA Results Summary – 2000-2001 Academic Year GPA

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	0.968	1.912	.167
Classification Year (C)	1	7.136	14.086	<.001
Gender (G)	1	1.446	2.855	.091
H x C	1	0.263	0.519	.472
H x G	1	0.012	0.024	.877
C x G	1	0.090	0.178	.673
H x C x G	1	0.072	0.143	.706
Error	825	417.940		

than non-freshmen ( $M = 3.01$ ,  $SD = 0.70$ ) for the academic year. No other significant effects emerged.

#### *Course Grades*

In order to test Hypothesis 7, which predicted that Maple residents would achieve higher scores than Larch residents for specific core courses, residents' grades for basic courses were obtained through the records of the Registrar's Office. All basic courses for which at least 40 individuals in the total sample received a grade were included in the analysis (see Appendix K for the list of these courses). Grades received in these courses were used to compute a course group GPA for each resident. Mean course group GPAs for Maple and Larch residents were compared using Three-Way Analysis of Variance, blocking on hall, classification year, and gender (see Table 15). No significant results emerged.

Table 15. ANOVA Results Summary – Course GPA

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	1.283	1.820	.178
Classification Year (C)	1	1.910	2.711	.100
Gender (G)	1	1.577	2.210	.138
H x C	1	0.039	0.056	.813
H x G	1	0.049	0.007	.934
C x G	1	0.020	0.028	.867
H x C x G	1	0.684	0.971	.325
Error	694	488.956		

In addition, course-by-course comparisons were made for selected courses that were taken by a large number of residents. These courses were General Chemistry, Computer Applications, First Year Composition I and II, Discrete Mathematics for Business and Social Sciences, Calculus I, and Introduction to Psychology. Only freshmen were included in these analyses since the courses specified are usually taken during the freshman year. Two-Way Analysis of Variance, blocking on hall and gender was used to compare the mean grades of Maple and Larch residents for each course.

Significant results emerged for three of the seven courses. Larch residents achieved a higher mean grade ( $M = 2.71$ ,  $SD = 0.98$ ) than Maple residents ( $M = 2.22$ ,  $SD = 1.09$ ) for General Chemistry (see Table 16). In addition, Maple residents achieved higher grades for First Year Composition I and II ( $M=3.17$ ,  $SD=0.61$  and  $M=3.14$ ,  $SD=0.72$ , respectively) than

Table 16. ANOVA Results Summary – General Chemistry

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	6.983	6.177	.015
Gender (G)	1	0.938	0.830	.364
H x G	1	2.698	2.386	.125
Error	105	118.702		

Table 17. ANOVA Results Summary – First Year Composition I

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	2.501	5.774	.017
Gender (G)	1	1.720	3.970	.048
H x G	1	0.255	0.589	.444
Error	180	77.969		

Larch residents ( $M=2.91$ ,  $SD=0.73$  and  $M=2.90$ ,  $SD=0.84$ , respectively; see Tables 17 & 18, respectively). Gender was also significant for these two courses, with females achieving higher means than males for both First Year Composition I ( $M=3.18$ ,  $SD=0.65$  for females and  $M=2.97$ ,  $SD=0.68$  for males) and First Year Composition II ( $M=3.21$ ,  $SD=0.61$  for females and  $M=2.88$ ,  $SD=0.89$  for males).

Table 18. ANOVA Results Summary – First Year Composition II

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	4.450	7.856	.005
Gender (G)	1	9.783	17.269	<.001
H x G	1	0.550	0.972	.325
Error	346	196.006		

### *Retention*

Given the established relationship between LLCs and student retention, Hypothesis 8 predicted that Maple residents would have a higher retention rate than Larch residents. In order to test this hypothesis, logistic regression was used to assess for between-hall differences on the dichotomous variable of retention at the university (defined as current registration on the tenth class day of the fall semester following the evaluation year). Although between-hall differences on high school rank and ACT-C score were not found during background comparisons, these variables were used as covariates due to the strong likelihood of their being associated with retention. Preliminary analyses indicated that none of the interaction effects were significant; therefore, a simultaneous test of main effects was used to test this hypothesis. In support of Hypothesis 8, the analysis indicated a significant effect for hall, as well as for high school rank (see Table 19). Maple residents were retained at the university at a significantly higher rate (95.2%) than Larch residents (90.3%), and individuals with a higher high school rank were more likely than those with a lower rank to be retained at the university.

Table 19. Logistic Regression Results Summary - Retention

<b>Independent Variable</b>	<b>Wald <math>X^2</math></b>	<b>df</b>	<b>p</b>
High School Rank	435.989	1	.006
ACT-C Score	435.252	1	.391
Hall (H)	433.812	1	.230
Gender (G)	433.812	1	.984
Classification Year (C)	433.432	1	.538

### *Spring Time Allocation*

The spring follow-up survey asked respondents to estimate (using a 10-point scale) the amount of time they spent each week of the spring semester engaged in the following activities: attending classes and labs, studying alone, studying in groups, participating in recreational and social activities, talking with instructors outside of class, talking with advisors, fulfilling leadership roles, performing community service or volunteer work, and working for pay. Assessment of the Maple Hall program's effects on resident involvement in each of these activities was carried out using Three-Way Analyses of Covariance, blocking on hall, classification year, and gender. Relevant variables for which significant background differences were identified in the final survey sample served as covariates. These covariates included ACT-C score, the number of service experiences completed during high school, and the variable representing the degree to which respondents felt that their high school prepared them for college

*Studying Alone*

Hypothesis 9 predicted that due to their awareness of the hall's GPA requirement and to the more academic focus of the hall, Maple residents would report having spent more time per week than Larch residents studying alone during the spring semester. Consistent with the hypothesis, a significant main effect for hall did emerge (see Table 20), with Maple residents indicating that they had spent more time per week ( $M = 5.44$ ,  $SD = 2.92$ ) than Larch residents ( $M = 4.18$ ,  $SD = 2.34$ ) studying alone during the spring semester. The only other significant relationships for time studying alone were with the covariate representing the number of

Table 20. ANCOVA Results Summary – Time Spent Studying Alone

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	7.592	1.505	.221
Preparation for College	1	46.755	9.267	.003
Service Experiences	1	23.298	4.618	.033
Hall (H)	1	57.933	11.483	.001
Classification Year (C)	1	7.139	1.415	.236
Gender (G)	1	<0.001	<0.001	.996
H x C	1	0.949	0.188	.665
H x G	1	0.872	0.173	.678
C x G	1	0.878	0.174	.677
H x C x G	1	3.624	0.718	.398
Error	203	1024.154		

service experiences completed during high school and with the degree to which respondents felt prepared for college by their high school. Correlations for both covariates were in the positive direction.

### *Studying in Groups*

Due to the hall's GPA requirement and more academic focus, Hypothesis 10 predicted that Maple residents would report having spent more time per week than Larch residents studying in groups during the spring semester. A significant main effect for hall did not emerge, but the hall-by-classification year interaction term was significant (see Table 21).

Table 21. ANCOVA Results Summary – Time Spent Studying in Groups

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
ACT-C Score	1	8.336	3.264	.072
Preparation for College	1	2.004	0.785	.377
Service Experiences	1	2.090	0.818	.367
Hall (H)	1	7.045	2.759	.098
Classification Year (C)	1	1.338	0.524	.470
Gender (G)	1	15.790	6.183	.014
H x C	1	21.567	8.445	.004
H x G	1	0.041	0.016	.899
C x G	1	1.484	0.581	.447
H x C x G	1	4.756	1.862	.174
Error	204	520.994		

Post-hoc analyses, using the Least Significant Difference statistic, indicated that the only significant difference by hall was that the mean for the Maple non-freshmen ( $M = 3.02$ ,  $SD = 2.07$ ) was significantly greater than the mean for the Larch non-freshmen ( $M = 2.46$ ,  $SD = 1.60$ ;  $LSD = 1.13$ ,  $p = .004$ ). That is, Maple students who were in or beyond their sophomore year reported spending significantly more time studying in groups than Larch students who were in or beyond their sophomore year. These results provide partial support for, but are not entirely consistent with Hypothesis 10. In addition, the mean for the Maple non-freshmen ( $M = 3.02$ ,  $SD = 2.07$ ) was significantly greater than the mean for the Maple freshmen ( $M = 2.58$ ,  $SD = 1.75$ ;  $LSD = 0.75$ ,  $p = .018$ ).

The only other significant finding for the amount of time spent studying in groups was the main effect for gender (see Table 21). Females reported having spent less time per week ( $M = 2.45$ ,  $SD = 1.55$ ) than males ( $M = 2.78$ ,  $SD = 1.84$ ) studying in groups during the spring semester.

### *Community Service*

Due to the hall's community service co-curricular requirement, Hypothesis 11 predicted that Maple residents would report having spent more time per week than Larch residents engaged in community service or volunteer activities during the spring semester. Consistent with this hypothesis, the main effect for hall was significant (see Table 22), with the results indicating that Maple residents reported significantly higher means ( $M = 2.40$ ,  $SD = 1.84$ ) than Larch residents ( $M = 1.54$ ,  $SD = 1.02$ ) for the amount of time per week they spent performing community service. No other significant findings emerged.

Table 22. ANCOVA Results Summary – Time Spent in Community Service

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	9.206	3.272	.072
Preparation for College	1	3.240	1.152	.284
Service Experiences	1	10.195	3.624	.058
Hall (H)	1	18.194	6.467	.012
Classification Year (C)	1	0.953	0.339	.561
Gender (G)	1	0.304	0.108	.743
H x C	1	0.003	0.001	.972
H x G	1	0.016	0.006	.940
C x G	1	6.052	2.151	.144
H x C x G	1	1.104	0.392	.532
Error	204	573.936		

### *Leadership Roles*

Because performing leadership roles was one avenue by which Maple residents could meet the hall's campus involvement requirement, Hypothesis 12 predicted that Maple residents would report having spent more time per week than Larch residents fulfilling leadership roles during the spring semester. Contrary to this hypothesis, the main effect for hall was not significant (see Table 23). The main effect for classification year was significant, however, with freshmen reporting lower estimates ( $M = 2.32$ ,  $SD = 1.71$ ) than more advanced students ( $M = 3.01$ ,  $SD = 2.09$ ) for the amount of their time per week they

Table 23. ANCOVA Results Summary – Time Spent in Leadership Roles

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
ACT-C Score	1	0.003	0.008	.928
Preparation for College	1	0.731	0.234	.629
Service Experiences	1	33.122	10.619	.001
Hall (H)	1	9.265	2.970	.086
Classification Year (C)	1	38.521	12.350	.001
Gender (G)	1	6.538	2.096	.149
H x C	1	0.717	0.230	.632
H x G	1	1.221	0.388	.534
C x G	1	11.145	3.573	.060
H x C x G	1	<0.001	<0.001	.994
Error	203	633.161		

spent in leadership roles during the spring semester. The high school service experiences covariate was significantly and positively associated with time spent in leadership roles. No other significant results emerged.

#### *Classes and Labs*

A specific hypothesis was not made concerning the amount of time per week residents would spend attending classes and labs during the spring semester. However, exploratory comparisons on this variable yielded a significant effect for hall (see Table 24), with Maple residents reporting that they had spent more time per week ( $M = 6.95$ ,  $SD = 1.82$ )

Table 24. ANCOVA Results Summary – Time Spent in Classes &amp; Labs

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	25.232	7.264	.008
Preparation for College	1	0.189	0.054	.816
Service Experiences	1	23.029	6.630	.011
Hall (H)	1	42.344	12.191	.001
Classification Year (C)	1	0.801	0.231	.632
Gender (G)	1	1.295	0.373	.542
H x C	1	0.111	0.032	.859
H x G	1	35.132	10.115	.002
C x G	1	5.757	1.657	.199
H x C x G	1	36.507	10.511	.001
Error	204	708.566		

than Larch residents ( $M = 6.17$ ,  $SD = 2.33$ ) attending classes and labs. ACT-C score and the number of high school service experiences were also significantly and positively associated with reported time spent in classes and labs.

In addition, the hall-by-gender interaction effect was significant. Post-hoc analyses, using the Least Significant Difference statistic, revealed that the only significant difference by hall was that the mean for Maple males was significantly higher than the mean for Larch males, suggesting that the main effect for hall was significant for males but not for females. The relevant statistics are reported in Table 25. Significant within-hall differences included a

Table 25. Means by Hall, Classification Year, &amp; Gender for Time Spent in Class

	Male Residents			Female Residents		
	Maple	Larch	<i>p</i> <sup>a</sup>	Maple	Larch	<i>p</i> <sup>a</sup>
<b>Freshmen</b>	7.13 (1.83)	6.22 (2.74)	.043	6.77 (1.81)	5.83 (2.36)	.007
<b>Non-Freshmen</b>	8.08 (1.75)	5.28 (2.78)	<.001	6.45 (1.68)	7.25 (1.02)	.632
<b>All Classes</b>	7.32 (1.84)	5.59 (2.76)	<.001	6.70 (1.78)	6.58 (1.90)	.744

*Note.* Standard Deviations appear in parentheses.

<sup>a</sup>Significance values represent the Least Significant Difference Statistic.

higher mean for Maple males than for Maple females ( $LSD = 0.62, p = .049$ ), and a higher mean for Larch females than for Larch males ( $LSD = 0.99, p = .046$ ). The relevant means and standard deviations appear in Table 25.

Furthermore, the three-way, hall-by-classification year-by-gender interaction effect was significant, with several differences by hall indicated. Maple non-freshman males reported significantly higher means than Larch non-freshman males. Similarly, Maple freshman males reported significantly higher means than Larch freshman males, and Maple freshman females reported significantly higher means than Larch freshman females. This pattern indicates that the only group for whom the main effect of hall did not hold true was females who were in or beyond their second year. The relevant statistics are reported in Table 25.

The post-hoc analyses for the three-way interaction also revealed several significant differences within halls. These differences included a higher mean for Maple non-freshman males than for Maple non-freshman females ( $LSD = 1.18, p = .042$ ) and a higher mean for Larch non-freshman females than for Larch non-freshman males ( $LSD = 1.63, p = .002$ ). Larch non-freshman females also reported a higher mean than Larch freshman females ( $LSD = 1.07, p = .037$ ).

#### *Recreational/Social Activities*

A specific hypothesis was not made regarding the number of hours per week residents would spend participating in recreational and social activities, but the analysis revealed a significant main effect for hall (see Table 26), with Maple residents reporting higher means ( $M = 5.54, SD = 2.26$ ) than Larch residents ( $M = 4.12, SD = 2.32$ ) for the amount of time spent in recreational and social activities. No other significant findings emerged.

#### *Talking with Instructors*

Since the Maple Hall program did not contain any components aimed at improving faculty-student relationships, significant between-hall differences were not predicted for the amount of time residents would spend each week talking with instructors outside of class. In fact, the main effect for hall was not significant, but the effect for classification year was (see Table 27). Freshman residents of both halls reported having spent less time ( $M = 1.60, SD = 0.96$ ) than more advanced students ( $M = 1.97, SD = 1.25$ ) talking with instructors outside of class during the spring semester. The only other significant result of the comparison was the negative correlation with ACT-C score.

Table 26. ANCOVA Results Summary – Time Spent in Recreational Activities

<b>Independent Variables</b>	<i>df</i>	<i>SS</i>	<i>F</i>	<i>p</i>
ACT-C Score	1	18.702	3.521	.062
Preparation for College	1	7.058	1.328	.251
Service Experiences	1	0.769	0.145	.704
Hall (H)	1	70.949	13.349	<.001
Classification Year (C)	1	4.594	0.864	.354
Gender (G)	1	0.593	0.112	.739
H x C	1	1.081	0.203	.652
H x G	1	2.077	0.391	.533
C x G	1	6.059	1.140	.287
H x C x G	1	3.878	0.730	.394
Error	204	1084.267		

### *Talking with Advisors*

Similarly, between-hall differences were not predicted for the number of hours per week spent talking with advisors during the spring semester. There were no significant main effects, but the hall-by-classification year-by-gender interaction was significant (see Table 28). Post-hoc analyses using the Least Significant Difference Statistic revealed no differences between halls, but the mean for Maple freshman females was significantly lower ( $M = 1.48, SD = 0.94$ ) than that for Maple females who were in or beyond their sophomore year ( $M = 2.05, SD = 0.99, LSD = 0.58, p = .008$ ). The only other significant finding for time spent talking with advisors was the negative correlation with ACT-C score.

Table 27. ANCOVA Results Summary – Time Spent Talking with Instructors

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	7.610	6.612	.011
Preparation for College	1	0.595	0.517	.473
Service Experiences	1	0.269	0.234	.629
Hall (H)	1	0.093	0.081	.777
Classification Year (C)	1	5.209	4.525	.035
Gender (G)	1	1.044	0.907	.342
H x C	1	0.395	0.343	.558
H x G	1	0.695	0.604	.438
C x G	1	0.101	0.088	.767
H x C x G	1	0.925	0.803	.371
Error	204	234.811		

### *Working for Pay*

Finally, between-hall comparison was also performed for the variable representing the amount of time per week residents worked for pay during the spring semester. A specific hypothesis was not proposed with respect to this variable. The analysis revealed the main effect for classification year as the only significant result (see Table 29). Freshman residents reported lower means ( $M = 3.09$ ,  $SD = 2.93$ ) than more advanced students ( $M = 4.52$ ,  $SD = 3.22$ ) for the amount of time spent working for pay during the spring semester.

Table 28. ANCOVA Results Summary – Time Spent Talking with Advisors

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	9.704	8.691	.004
Preparation for College	1	0.456	0.409	.523
Service Experiences	1	0.439	0.393	.531
Hall (H)	1	0.287	0.257	.613
Classification Year (C)	1	0.281	0.252	.617
Gender (G)	1	0.018	0.016	.900
H x C	1	0.765	0.685	.409
H x G	1	1.914	1.714	.192
C x G	1	0.046	0.041	.839
H x C x G	1	4.728	4.234	.041
Error	204	227.779		

### *Resident Satisfaction*

#### *Satisfaction with Facilities*

Considering the recent aesthetic and functional renovations of Maple Hall, Hypothesis 13 predicted that its residents would report significantly greater satisfaction with the hall's facilities than that reported by the residents of Larch. Three-Way Analysis of Variance, blocking on hall, classification year, and gender was used to test this hypothesis. No covariates were used since no significant differences on relevant variables emerged during background analyses for the final survey sample. The results of the analysis revealed a significant main effect for hall, with Maple residents reporting significantly more

Table 29. ANCOVA Results Summary – Time Spent Working for Pay

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
ACT-C Score	1	6.579	0.746	.389
Preparation for College	1	3.584	0.406	.524
Service Experiences	1	23.990	2.720	.101
Hall (H)	1	7.459	0.846	.359
Classification Year (C)	1	155.334	17.614	<.001
Gender (G)	1	<0.001	<0.001	.997
H x C	1	20.468	2.321	.129
H x G	1	3.034	0.344	.558
C x G	1	2.600	0.295	.588
H x C x G	1	22.212	2.519	.114
Error	204	1799.040		

satisfaction ( $M = 3.91$ ,  $SD = 0.63$ ; 5-point scale) with their hall's facilities than Larch residents ( $M = 3.27$ ,  $SD = 0.69$ ; see Table 30). Individual scale item means and standard deviations for Maple and Larch respondents are reported in Table 31. This analysis revealed no other significant results.

#### *Satisfaction with Staff*

For Maple Hall, the staff included a Community Assistant (CA) and an Academic Resource Coordinator (ARC) for each floor and a Hall Director (HD) for the entire building. Larch staff included a Resident Assistant (RA) for each floor and a Hall Director for the hall.

Table 30. ANOVA Results Summary – Satisfaction with Facilities

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	12.769	30.512	<.001
Classification Year (C)	1	0.043	0.104	.748
Gender (G)	1	0.521	1.244	.266
H x C	1	0.585	1.397	.239
H x G	1	0.424	1.013	.315
C x G	1	0.024	0.058	.810
H x C x G	1	0.013	0.031	.861
Error	219	91.650		

Table 31. Descriptive Statistics for Satisfaction with Facilities Scale Individual Items

	<b>Maple Hall</b>		<b>Larch Hall</b>	
	<b><i>M</i></b>	<b><i>SD</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Computer Labs	3.54	1.22	2.95	1.17
Furniture in Rooms	3.87	1.10	3.29	0.96
Furniture in Common Areas	4.38	0.78	3.23	1.07
Study Areas	4.22	0.82	3.31	0.93
Overall Facilities	4.33	0.67	3.63	0.84
Degree to Which Facilities Encouraged Community Atmosphere	3.21	1.14	3.29	0.93
Degree to Which Facilities Encouraged an Academically Supportive Environment	3.83	0.83	3.22	0.89

As part of the spring follow-up questionnaire, residents of both halls indicated their degree of satisfaction with their CA or RA, their HD, and their ARC (Maple residents only). They also rated how well their floor staff (i.e., CA or RA and ARC) performed the various duties of their respective positions. All of these items were combined to create the satisfaction with staff scale. Since Maple Hall had one more staff member than Larch and since there were different numbers of items for each of the staff members, weighted scores were calculated so that residents' satisfaction with each position contributed equally to the overall scale score. Individual items and the formulas for scale score calculations are provided in Appendix G.

Because Maple Hall employed an additional staff member whose primary purpose was to assist residents with academic development, it was predicted (in Hypothesis 14) that Maple residents would report significantly more satisfaction than Larch residents with the staff in their hall. Three-Way Analysis of Variance, blocking on hall, classification year, and gender was used to test this hypothesis. No covariates were used since no significant differences on relevant variables emerged during background analyses for the final survey sample. This analysis yielded no significant results (see Table 32).

Although hypotheses were not made concerning within-hall differences, Maple residents' relative satisfaction ratings for the new (ARC) and traditional (CA, HD) staff positions are of interest. Comparisons were made by computing difference scores (i.e., Satisfaction with CA minus Satisfaction with ARC and Satisfaction with HD minus Satisfaction with ARC) and performing one-sample t-tests on the resulting variables. In both cases, the results were significant, with Maple residents reporting higher satisfaction with their CAs ( $M = 4.19, SD = 0.77; t = 7.732, p < .001$ ) and with their HDs ( $M = 3.90, SD = 0.94; t = 3.892, p < .001$ ) than with their ARCs ( $M = 3.53, SD = 1.10$ ).

Table 32. ANOVA Results Summary – Satisfaction with All Staff

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	0.019	0.041	.840
Classification Year (C)	1	0.280	0.589	.444
Gender (G)	1	0.337	0.709	.401
H x C	1	<0.001	0.001	.976
H x G	1	0.243	0.511	.475
C x G	1	0.020	0.042	.838
H x C x G	1	1.297	2.729	.100
Error	215	102.159		

In order to determine whether or not the lower satisfaction ratings for Maple ARCs was preventing the detection of a difference between Maple and Larch residents' level of satisfaction with traditional staff members, the satisfaction with staff score for Maple residents was computed again, leaving out the items related to the ARC. Three-Way Analysis of Variance, blocking on hall, classification year, and gender was used to test for between-hall differences in satisfaction with traditional staff members (i.e., CA/RA and HD). No covariates were used since no significant differences on relevant variables were detected during background analyses for the final survey sample. This analysis yielded no significant results (see Table 33).

Table 33. ANOVA Results Summary – Satisfaction with CA/RA &amp; HD

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
Hall (H)	1	0.322	0.731	.394
Classification Year (C)	1	0.088	0.193	.661
Gender (G)	1	0.238	0.524	.470
H x C	1	0.410	0.903	.343
H x G	1	0.358	0.787	.376
C x G	1	0.070	0.156	.693
H x C x G	1	0.322	0.710	.400
Error	215	97.633		

### *Satisfaction with Policies*

Because Maple Hall's policies were designed to create a more academically-supportive environment, Hypothesis 15 predicted that Maple residents would report being more satisfied than Larch residents with the policies in their hall. Three-Way Analysis of Variance, blocking on hall, classification year, and gender was used to test this hypothesis. No covariates were used since no significant differences on relevant variables emerged during background analyses for the final survey sample. Contrary to the hypothesis, no significant effect for hall emerged, nor were there any other significant results (see Table 34).

Although a significant difference was not found for residents' overall satisfaction with their hall's policies, there was a non-significant trend in the opposite direction than that predicted. (i.e., Maple residents reported less satisfaction). Therefore, follow-up analyses

Table 34. ANOVA Results Summary – Satisfaction with Policies

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Hall (H)	1	2.367	3.383	.067
Classification Year (C)	1	0.034	0.049	.826
Gender (G)	1	1.698	2.427	.121
H x C	1	0.544	0.777	.379
H x G	1	0.735	1.051	.306
C x G	1	0.416	0.595	.441
H x C x G	1	0.659	0.942	.333
Error	219	153.210		

were performed to determine whether or not the mean satisfaction of Maple versus Larch residents showed the same pattern for each of the three policies (i.e., visitation, substance use, quiet hours). Three-Way Analyses of Variance, blocking on hall, classification year, and gender yielded only one significant between-hall difference. Maple residents reported being significantly less satisfied ( $M = 2.84$ ,  $SD = 1.27$ ) than Larch residents ( $M = 4.23$ ,  $SD = 0.90$ ) with the visitation policy in their hall ( $F = 64.505$ ,  $p < .001$ ).

#### *Academic Cognitions*

##### *Self-Efficacy*

Three-Way Analyses of Covariance, blocking on hall, classification year, and gender, was used to assess for effects of the Maple Hall program on academic self-efficacy. The overall academic self-efficacy scale was broken down into scales for math, science, and basic

core courses (see Appendix F). All were on a 9-point scale with 1 representing “no confidence” and 9 representing “complete confidence”. The analysis was performed for each of these subscales as well as for the overall scale and for the item referring to courses in the student’s major. Fall scores on the self-efficacy measures and relevant variables for which significant background differences were identified in the final survey sample served as covariates. These latter covariates included ACT-C score and the variable representing the degree to which respondents felt that their high school prepared them for college.

*Required Courses in Major.* Hypothesis 16 predicted that Maple residents would report higher self-efficacy than Larch residents for their ability to successfully complete courses in their major with a grade of “B” or better. Contrary to the hypothesis, the results of the analysis did not indicate a significant main effect for hall (see Table 35). However, the hall-by-gender interaction effect was significant. Post-hoc analyses using the Least Significant Difference statistic revealed no differences between halls. The only significant difference was that Maple males reported significantly higher self-efficacy for required courses in their majors ( $M = 7.71, SD = 1.38$ ) than did Maple females ( $M = 7.13, SD = 1.30, LSD = 0.58, p = .008$ ). In addition, the three covariates (fall score on the item, perceived adequacy of preparation for college, and ACT-C score) were all significantly and positively correlated with this item.

*Basic Core Courses.* Maple residents were also expected to report higher efficacy expectations than Larch residents for their ability to complete basic core courses, such as Introductory Philosophy, with a grade of “B” or better (Hypothesis 17). Consistent with this hypothesis, the comparison revealed a significant main effect for hall (see Table 36), with Maple residents exhibiting a higher mean score ( $M = 6.30, SD = 1.51$ ) than Larch residents

Table 35. ANCOVA Results Summary - Required Courses in Major

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Fall Score on Item	1	19.284	12.352	.001
College Preparation	1	9.310	5.963	.015
ACT-C	1	9.390	6.015	.015
Hall (H)	1	6.001	3.844	.051
Classification Year (C)	1	5.775	3.699	.056
Gender (G)	1	0.200	0.128	.721
H x C	1	0.045	0.035	.852
H x G	1	6.875	4.404	.037
C x G	1	0.160	0.103	.749
H x C x G	1	0.030	0.019	.889
Error	203	316.912		

( $M = 6.13$ ,  $SD = 1.47$ ) for the basic academic self-efficacy subscale. The three covariates (fall score on the basic academic self-efficacy subscale, perceived adequacy of preparation for college, and ACT-C score) were all significantly and positively correlated with this subscale. No other significant results emerged.

**Math Courses.** As indicated in Hypothesis 18, Maple residents were expected to report higher self-efficacy than Larch residents for their ability to complete a range of math courses (from basic to advanced) with a grade of “B” or better. In support of this hypothesis, a significant main effect for hall did emerge in the analysis (see Table 37). Maple residents

Table 36. ANCOVA Results Summary – Basic Core Courses

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Fall Score on Subscale	1	4.964	4.167	<.001
College Preparation	1	17.033	14.300	.043
ACT-C	1	91.081	76.470	<.001
Hall (H)	1	5.792	4.863	.029
Classification Year (C)	1	0.515	0.432	.512
Gender (G)	1	0.002	0.002	.967
H x C	1	2.408	2.021	.157
H x G	1	0.372	0.312	.577
C x G	1	0.016	0.013	.908
H x C x G	1	0.253	0.212	.646
Error	194	231.068		

reported significantly higher efficacy expectations ( $M = 6.18$ ,  $SD = 1.65$ ) than Larch residents ( $M = 5.75$ ,  $SD = 1.71$ ) for successful completion of the math courses indicated. Significant effects did not emerge for classification year or for the interaction terms, but the main effect for gender was significant, with females reporting lower efficacy expectations ( $M = 5.69$ ,  $SD = 1.71$ ) than males ( $M = 6.57$ ,  $SD = 1.49$ ) for math courses. Finally the three covariates (ACT-C score, fall score on the subscale, and perceived adequacy of preparation for college) were all significantly and positively associated with the spring math self-efficacy score.

Table 37. ANCOVA Results Summary – Math Courses

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Fall Score on Subscale	1	8.627	5.177	<.001
College Preparation	1	21.262	12.759	.024
ACT-C	1	80.621	48.379	<.001
Hall (H)	1	7.722	4.634	.033
Classification Year (C)	1	2.842	1.705	.193
Gender (G)	1	9.484	5.691	.018
H x C	1	4.653	2.792	.096
H x G	1	0.001	0.001	.978
C x G	1	1.618	0.971	.326
H x C x G	1	0.105	0.063	.802
Error	200	333.290		

*Science Courses.* It was also predicted, in Hypothesis 19, that Maple residents would exhibit higher mean scores than Larch residents for the science self-efficacy subscale, which referred to courses such as Human Anatomy and General Physics. Contrary to this expectation, the analysis did not yield a significant effect for hall. The only significant results for this comparison were the positive correlations with ACT-C score and with the fall science self-efficacy subscale score (see Table 38).

*Overall Academic Self-Efficacy.* Hypothesis 20 predicted that Maple residents would report higher mean scores than Larch residents for the overall academic self-efficacy scale on

Table 38. ANCOVA Results Summary – Science Courses

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Fall Score on Subscale	1	3.238	1.840	<.001
College Preparation	1	34.314	19.497	.176
ACT-C	1	143.133	81.327	<.001
Hall (H)	1	5.948	3.379	.067
Classification Year (C)	1	0.416	0.236	.627
Gender (G)	1	1.541	0.875	.351
H x C	1	3.515	1.997	.159
H x G	1	1.433	0.814	.368
C x G	1	0.439	0.250	.618
H x C x G	1	0.346	0.197	.658
Error	202	355.513		

the spring survey. Consistent with this hypothesis, a significant main effect for hall did emerge (see Table 39), with Maple residents exhibiting significantly greater self-efficacy ( $M = 6.27$ ,  $SD = 1.35$ ) than Larch residents ( $M = 6.03$ ,  $SD = 1.42$ ) for their ability to complete a variety of basic and more advanced university courses with a grade of “B” or better. All three of the covariates (fall score on the scale, perceived adequacy of preparation for college, and ACT-C score) were significantly and positively associated with the scale. No other significant effects emerged.

Table 39. ANCOVA Results Summary – Overall Academic Self-Efficacy

<b>Independent Variables</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
Fall Score on Subscale	1	5.497	5.520	<.001
College Preparation	1	22.934	23.031	.020
ACT-C	1	53.318	53.544	<.001
Hall (H)	1	6.197	6.223	.013
Classification Year (C)	1	.302	0.303	.582
Gender (G)	1	1.226	1.231	.269
H x C	1	2.785	2.797	.096
H x G	1	0.006	0.006	.941
C x G	1	0.155	0.156	.693
H x C x G	1	0.045	0.045	.831
Error	190	189.199		

### *Grade Attributions*

Hypothesis 21 predicted that Maple residents would be more likely than Larch residents to attribute academic outcomes to effort (an internal, unstable cause). In order to test this hypothesis, hall means for the eight grade attribution subscale scores were compared using Three-Way Analyses of Covariance, blocking on hall, classification year, and gender. Relevant variables for which significant background differences were found in the final survey sample were entered as covariates. These covariates were: ACT-C score, fall score on the relevant attribution scale, and the college preparation variable. No significant effects for

hall, classification year, or any of the interaction terms were identified. The main effect for gender was significant for two subscales, indicating that males were more likely than females to endorse context (i.e., instructor's grading or teaching style) as the cause of both success ( $M = 0.18$ ,  $SD = 0.49$  for males vs.  $M = 0.05$ ,  $SD = 0.25$  for females) and failure ( $M = 0.26$ ,  $SD = 0.55$  for males vs.  $M = 0.12$ ,  $SD = 0.39$  for females) scenarios. The preparation for college covariate was significantly and negatively correlated with context attributions (i.e., instructor's grading or teaching style) for success. In addition, the fall score for each attribution subscale was significantly and positively associated with the spring score, with one exception. The correlation was not significant between fall and spring scores for the subscale representing attributions of failure to luck (an external, unstable cause). Summaries of the Analyses of Covariance appear in Table 40.

Table 40. ANOVA Results Summary – Attribution Subscales

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
<b>Internal, Stable Attributions for Failure</b>				
Preparation for College	1	<0.001	0.002	.963
ACT-C	1	0.703	3.151	.077
Fall Subscale Score	1	4.144	18.572	<.001
Hall (H)	1	0.036	0.161	.689
Classification Year (C)	1	0.094	0.424	.516
Gender (G)	1	0.275	1.231	.268
H x C	1	0.483	2.164	.143

Table 40. (continued)

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
H x G	1	0.048	0.213	.645
C x G	1	<0.001	<.001	.995
H x C x G	1	<0.001	0.002	.961
Error	201	44.849		
<b>Internal, Unstable Attributions for Failure</b>				
Preparation for College	1	0.497	1.133	.288
ACT-C	1	0.858	1.956	.163
Fall Subscale Score	1	9.234	21.051	<.001
Hall (H)	1	0.002	0.004	.952
Classification Year (C)	1	0.386	0.880	.349
Gender (G)	1	0.108	0.247	.620
H x C	1	1.131	2.578	.110
H x G	1	0.020	0.047	.828
C x G	1	<0.001	0.002	.963
H x C x G	1	<0.001	0.001	.980
Error	201	88.168		
<b>External, Stable Attributions for Failure</b>				
Preparation for College	1	0.446	2.157	.143
ACT-C	1	0.082	0.398	.529

Table 40. (continued)

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Fall Subscale Score	1	2.851	13.774	<.001
Hall (H)	1	0.006	0.030	.862
Classification Year (C)	1	0.010	0.049	.824
Gender (G)	1	1.129	5.455	.020
H x C	1	0.031	0.152	.697
H x G	1	0.343	1.656	.200
C x G	1	0.032	0.153	.696
H x C x G	1	0.005	0.026	.871
Error	201	41.596		
<b>External, Unstable Attributions for Failure</b>				
Preparation for College	1	0.004	0.026	.872
ACT-C	1	0.014	0.733	.393
Fall Subscale Score	1	<0.001	<.001	.997
Hall (H)	1	0.021	1.174	.280
Classification Year (C)	1	0.027	1.432	.233
Gender (G)	1	0.030	1.582	.210
H x C	1	0.030	1.605	.207
H x G	1	0.024	1.306	.254
C x G	1	0.025	1.324	.251

Table 40. (continued)

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
H x C x G	1	0.024	1.295	.256
Error	201	3.764		
<b>Internal, Stable Attributions for Success</b>				
Preparation for College	1	1.831	3.898	.050
ACT-C	1	0.116	0.246	.620
Fall Subscale Score	1	6.304	13.416	<.001
Hall (H)	1	0.598	1.272	.261
Classification Year (C)	1	0.293	0.623	.431
Gender (G)	1	0.168	0.358	.550
H x C	1	0.882	1.877	.172
H x G	1	0.546	1.162	.282
C x G	1	0.119	0.252	.616
H x C x G	1	0.006	0.013	.910
Error	201	94.447		
<b>Internal, Unstable Attributions for Success</b>				
Preparation for College	1	0.004	0.008	.930
ACT-C	1	0.277	0.490	.485
Fall Subscale Score	1	9.930	17.572	<.001
Hall (H)	1	0.054	0.095	.758

Table 40. (continued)

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
Classification Year (C)	1	1.376	2.436	.120
Gender (G)	1	1.488	2.633	.106
H x C	1	0.746	1.320	.252
H x G	1	0.007	0.013	.911
C x G	1	0.332	0.587	.444
H x C x G	1	0.168	0.297	.586
Error	201	113.588		
<b>External, Stable Attributions for Success</b>				
Preparation for College	1	0.462	4.648	.032
ACT-C	1	<0.001	0.001	.975
Fall Subscale Score	1	1.588	15.982	<.001
Hall (H)	1	0.035	0.354	.552
Classification Year (C)	1	0.218	2.198	.140
Gender (G)	1	0.658	6.624	.011
H x C	1	0.048	0.482	.488
H x G	1	0.133	1.341	.248
C x G	1	0.279	2.813	.095
H x C x G	1	0.068	0.681	.410
Error	201	19.969		

Table 40. (continued)

<b>Independent Variables</b>	<b><i>df</i></b>	<b><i>SS</i></b>	<b><i>F</i></b>	<b><i>p</i></b>
<b>External, Unstable Attributions for Success</b>				
Preparation for College	1	0.377	3.814	.052
ACT-C	1	0.050	0.504	.478
Fall Subscale Score	1	1.603	16.237	<.001
Hall (H)	1	0.130	1.313	.253
Classification Year (C)	1	0.031	0.319	.573
Gender (G)	1	0.002	0.016	.899
H x C	1	0.061	0.622	.431
H x G	1	0.087	0.877	.350
C x G	1	0.173	1.756	.187
H x C x G	1	0.063	0.639	.425
Error	201	19.849		

## DISCUSSION

Background comparisons of Maple and Larch residents in the total and final survey samples yielded few significant contrasts. There were a few more significant contrasts within the background sample, but the two groups were still quite similar. Any relevant variables for which differences did emerge were used as covariates in the appropriate follow-up analyses. Therefore, one can be relatively confident that significant between-hall differences for outcome analyses represent the effects of the Maple Hall program for residents of that building.

Initial evidence that the program had at least some impact on residents was provided by the significant findings for comparisons of residents' expectations of how they would spend their time during the fall semester. During their orientation to the hall, and prior to completing the background survey, Maple residents were informed that they would be required to maintain a minimum GPA, participate in community service activities, and demonstrate campus involvement through membership in a campus organization and/or a leadership position in student or hall government. Findings that Maple residents expected to spend more time studying in groups, participating in leadership activities, and performing community service suggest that knowledge of the Maple Hall requirements impacted residents' expectations for their fall-semester experience. Comparison of the amount of time residents expected to spend studying alone also yielded a non-significant trend in the predicted direction.

Some of Maple residents' expectations came to fruition, in that Maple residents reported having spent more time per week during the spring semester participating in community service activities, and Maple non-freshmen reported having spent more time than

Larch non-Freshmen studying in groups. Although the result was not significant, the main effect for hall also showed a non-significant trend in the expected direction for time spent studying in groups. The differences in group study time may be due to the presence in Maple of a greater number of learning teams, the members of which are encouraged to study together. Furthermore, Maple residents reported having spent more time studying alone, participating in recreational and social activities, and attending classes and labs than Larch residents; although, the latter result did not hold true for non-freshman women. These findings suggest that the Maple Hall program was successful in its aims of encouraging both a serious academic focus and increased resident involvement in the university community. A significant between-hall difference was not found for the amount of time spent in leadership roles, but there was a non-significant trend in the expected direction. Differences were neither expected nor found for the amount of time spent talking with instructors outside of class, talking with advisors, or working for pay.

The finding that Maple residents were significantly more satisfied with the facilities of their hall is not surprising given that the hall was renovated just one year prior to the study year. The renovations included considerable aesthetic improvements to the interior of the building as well as the addition of computer labs and kitchenettes on each floor, sinks in each room, more private bathrooms, nicer furniture, and better soundproofing between rooms.

The null finding for satisfaction with staff is also notable. Follow-up analyses revealed that Maple residents were significantly less satisfied with the ARCs than with the other staff members in the hall. Given these findings and the apparent lack of impact of the ARC position on residents' academic performance (discussed further below), administrators may want to consider changes to the training, selection procedures, and/or job description for

the Academic Resource Coordinator position. In fact, feedback from the ARCs themselves indicated that they felt that their training was not well suited to the duties of their position. Rather than having ARCs receive basically the same training as CAs, it may be beneficial to provide them with training in such job-related skills as identifying ineffective study strategies, teaching study skills and test-taking strategies, recognizing the signs of a potential learning disability and/or personal/emotional factors that may interfere with student performance, and making appropriate referrals.

Although a significant difference was not found for residents' overall satisfaction with their hall's policies, there was a non-significant trend in the opposite direction than that predicted. (i.e., Maple residents reported less satisfaction). Follow-up analyses revealed that Maple residents were significantly less satisfied than Larch residents with their hall's visitation policy. This finding is consistent with information obtained from residents during focus groups conducted as part of on-going research on the Maple Hall program. Although these results indicate that Department of Residence administrators may want to reconsider Maple's visitation policy, it is likely to be quite difficult to find a solution that adequately addresses both students' desires for freedom and parents' demands for rules that fit their values, especially considering that the parents usually pay the bills.

In addition to the findings discussed above, the results of the current study indicated that students who received the benefits of the Maple Hall program were retained at the university at a significantly higher rate than students who lived in the non-program hall. This finding is noteworthy for a number of reasons, including that increasing student retention is one of the primary goals of the Maple Hall program. Furthermore, higher retention rates benefit both the students and the university. For students, the most salient benefit of the

increased likelihood of degree completion is the improvement in future career opportunities. The university also benefits in several ways from increased retention. As delineated by Chapple (1984), higher retention rates translate into more stable student enrollment, greater tuition revenue, fewer recruitment pressures, and increased consumer satisfaction, the latter of which may serve to further boost enrollment through “word-of-mouth recommendations to potential students” (p. 28).

Additional positive effects of the Maple Hall program were related to residents’ academic self-efficacy. Despite the absence of significant background differences between mean self-efficacy scores for Maple and Larch residents, the analysis of spring survey results revealed that Maple residents reported higher basic, math, and overall academic self-efficacy than Larch residents. There were also non-significant trends for Maple residents reporting higher self-efficacy for science courses and for required courses in their respective majors. Since self-efficacy has consistently been related to academic performance (e.g., Chemers, et al., 2001; Lent, et al., 1984; Wood & Locke, 1987), and persistence (e.g., Bouffard-Bouchard, 1990; Lent, et al. 1984) the fact that Maple residents ended the academic year reporting higher self-efficacy than Larch students suggests that Maple residents may be better prepared to perform well academically during future semesters and may be more likely to remain at the university until degree completion. This would be an interesting question for future research on the Maple Hall program.

One might wonder how Maple residents achieved higher self-efficacy scores than Larch residents given that the mean levels of academic achievement for the two groups was not significantly different from one another (discussed further below). According to self-efficacy theory, however, this result is not surprising because past performance is only one of

the sources of information on which self-efficacy beliefs are based. Furthermore, different individuals may perceive the same outcome differently, due to the perceived difficulty of obtaining the outcome (Bandura, 1977) and/or to attributions about the cause(s) of the outcome (Försterling, 1985), resulting in divergent self-efficacy beliefs. It may be that residents of Maple Hall were made more aware of the behavioral antecedents of academic success (e.g., through instructional programming on academic skills and through referrals to tutoring and academic success resources), leading them to attribute academic outcomes to their own efforts and to have more confidence in their ability to influence their level of academic success through effort and the application of appropriate study skills.

Although the null findings for the grade attributions scales do not provide support for this hypothesis, the measurement of attributions used in this study may have interfered with the ability to detect differences between the residence hall groups. Out of concern for keeping the background and spring surveys to a reasonable length, only four items were used to assess attributions—two each for failure and success experiences, and respondents chose one of the four causes (i.e., ability, effort, context, luck) for each scenario described. Although this strategy did help reduce the length of the surveys, it resulted in substantial restriction of the range of subscale scores, making it difficult to detect any between-hall differences that might exist. Therefore, if the effect of the Maple Hall program or other learning communities on grade attributions is of interest in future research, investigators are encouraged to use an instrument, such as the Multidimensional-Multiattributonal Causality Scale (MMCS, Lefcourt, von Baeyer, Ware, & Cox, 1979) with demonstrated reliability and validity. It is also desirable, as is the case with the MMCS, to allow respondents to indicate a degree of agreement with various causal attributions for success and failure since evidence

indicates that individuals may perceive multiple influences on behavioral outcomes (Lefcourt, et al., 1979).

In contrast to the positive effects discussed above, the Maple Hall program did not have the expected effect on academic performance for the program year. Maple residents had a significantly higher mean GPA for the fall semester, suggesting that they got off to a better start at the university. There was not, however, a significant difference between Maple and Larch mean GPAs for the overall academic year, indicating that the program's initial impact on academic achievement did not continue into the spring semester. Similarly, no differences were found between Maple and Larch mean GPAs for specific core courses. The results were mixed for course-by-course comparisons, with Larch residents achieving a higher mean for General Chemistry and Maple residents achieving higher means for First Year Composition I and II.

Overall, the findings with respect to academic performance are in opposition to results of previous investigations that have indicated that residents of living-learning communities performed better academically than students in traditional residence halls (e.g., Blimling, 1994; Pascarella et al., 1994). A possible explanation for this discrepancy has to do with the hypothesis, championed by some researchers (e.g., Pascarella & Terenzini, 1980; Pascarella, et al., 1994), that the academic benefit of LLCs is the indirect result of their tendency to encourage and provide more opportunities for student interaction with faculty and peers. Although the Maple Hall program did encourage and facilitate interaction with peers, it did not focus on the development of student-faculty relationships. In fact, Maple and Larch residents reported similar means for the amount of time they spent talking with instructors outside of class.

Considering the established association between time spent studying and academic performance (e.g., Astin, 1993), the GPA and course grade results are also not consistent with the spring time allocation results in which Maple residents reported having spent more time attending classes and labs (with the exception of non-freshmen women) and studying alone than Larch residents and Maple non-freshmen reported having spent more time studying in groups than Larch non-freshmen. It may be that Maple or Larch residents were inaccurate estimators of how they had spent their time. Another possible explanation for Maple residents' perception that they were studying more than Larch residents, despite similar academic outcomes, was suggested by a comment a Maple resident made to the researcher. She stated a belief that individuals who know that they have to work harder to achieve desired academic outcomes self-selected to live in Maple due to the hall's greater focus on academics. Although the absence of a background difference for ACT-C scores argues against different intellectual ability as an explanation for this need to work harder, it is possible that there was a higher incidence of poor study skills and/or learning disabilities among Maple residents.

Finally, the limitations of the current study should be noted. One such factor is that the possible effects of ethnicity were not assessed. Due to the limited number of residents of diverse backgrounds living in either hall, it was not possible to include ethnicity as a fixed factor in the analyses. However, it is possible that the Maple Hall program exerted different effects or degrees of effectiveness for residents of different cultures or ethnicities. The researcher is not aware of any other LLC evaluations that addressed this question. Consequently, a possible direction for future research would be examination of the impact of

living-learning communities, such as the Maple Hall program, on individuals of various cultures or ethnic backgrounds.

Another limitation of the study is the low return rate (26.9%) for the final survey sample (i.e., individuals who returned both fall and spring questionnaires), especially with respect to the non-program hall (15%). In order to assess for differences between students who returned surveys and those who did not, comparisons were conducted, using those variables for which data on all residents was available (gender, ethnicity, classification year, high school rank, and ACT-C score). Although few differences emerged with respect to these variables (e.g. females in both halls were more likely than males to have returned both surveys), the results of the analyses involving the final survey sample (i.e., spring time allocation, resident satisfaction, academic self-efficacy, and grade attributions) should be interpreted with the possibility of sample bias in mind.

In summary, the Maple Hall program seems to have had a generally positive impact on residents, with the main benefit being the higher retention rate for Maple residents compared to students who lived in Larch. Other significant findings included higher basic, math, and overall academic self-efficacy, greater satisfaction with hall facilities, and increased time spent attending classes and labs, studying, performing community service, and participating in recreational and social activities (an indicator of involvement in the university community). Although the absence of a significant impact on residents' academic performance is surprising, the overall results of the investigation support the continuation of the Maple Hall program and provide potential directions for future research on this and similar living-learning programs.

**APPENDIX A**  
**BACKGROUND QUESTIONNAIRES**

**Maple Hall Background Questionnaire  
Fall Semester 2000**

**Record the following information directly on the provided bubble sheet using a #2 pencil.**

Write your social security number in the spaces labeled "Identification Number," and darken the appropriate circle below each digit. The last space will remain blank.

Darken the appropriate circles to record your birth date, sex, and year in college.

In the section labeled "Special Codes," a "1" has been entered under the letter "K" and the appropriate circle darkened in order to identify your residence hall. Under the letter "L," please enter the number of the floor on which you live and darken the appropriate circle.

**Respond to each of the following questions by darkening the appropriate circle on your bubble sheet for that question. Use a #2 pencil and be very careful not to get out of sequence on the bubble sheet.**

1. Are you a member of a learning community or learning team (e.g., BEST, PWISE, ACES)? 1. Yes 2. No  
If yes, write the name of your learning community or team in the top margin of your bubble sheet.
2. Which of the following best describes your race/ethnicity?
 

1. European American/Caucasian	3. African American	5. Native American/American Indian
2. Hispanic American	4. Asian American	6. Other
3. What was the approximate size of your graduating class in high school?
 

1. less than 100	3. 200 to 299	5. 400 to 499	7. 600 to 699
2. 100 to 199	4. 300 to 399	6. 500 to 599	8. 700 or more
4. What type of high school did you attend? 1. Public 2. Private 3. Home School
5. Was your high school? 1. Co-educational 2. All female 3. All male
6. How many leadership positions did you hold during high school?
 

1. None	2. One or two	3. Three or four	4. Five or six	5. More than six
---------	---------------	------------------	----------------	------------------
7. How many community service experiences have you had?
 

1. None	2. One or two	3. Three or four	4. Five or six	5. More than six
---------	---------------	------------------	----------------	------------------
8. How well do you think your high school prepared you for college?
 

1. very poorly	2. poorly	3. adequately	4. well	5. very well
----------------	-----------	---------------	---------	--------------

**Items 9-10. Using the scale below, please indicate approximately how many of your acquaintances from high school are:**

	1	2	3	4	5	6	7	8	9 or more	none
9. enrolled at ISU this year?	1	2	3	4	5	6	7	8	9	10
10. living in the same residence hall house?	1	2	3	4	5	6	7	8	9	10

**11. Where does your immediate family live?**

- |   |  |
|---|--|
| 1. In a major city (pop. > 200,000)                     | 4. In a large town (pop. 10,000- 25,000)       |
| 2. In a city of moderate size ( pop. 100,000 - 200,000) | 5. In a small town (pop. < 10,000)             |
| 3. In a small city (pop. 25,000 - 100,000)              | 6. In the country or on a farm outside of town |

**Items 12-17.** Please use the scale below to record the **highest** level of education attained by each of the following relatives. If you are uncertain about the educational history of one of the relatives, make your best estimate. Respond to all individuals that apply, even if the person is now deceased.

	Less than high school	High school	Technical or Vocational school	Bachelor's degree	Master's degree	Doctoral degree
<b>12. Biological or Adoptive Father</b>	1	2	3	4	5	6
<b>13. Biological or Adoptive Mother</b>	1	2	3	4	5	6
<b>14. Maternal Grandmother</b>	1	2	3	4	5	6
<b>15. Maternal Grandfather</b>	1	2	3	4	5	6
<b>16. Paternal Grandmother</b>	1	2	3	4	5	6
<b>17. Paternal Grandfather</b>	1	2	3	4	5	6

**Items 18-21.** Please indicate how many of the following relatives are ISU alumni. Darken the "9" circle if the answer is "9 or more," and darken the last circle ("10") if the answer is "none".

	1	2	3	4	5	6	7	8	9 or more	none
<b>18. Parents</b>	1	2	3	4	5	6	7	8	9	10
<b>19. Grandparents</b>	1	2	3	4	5	6	7	8	9	10
<b>20. Aunts &amp; Uncles</b>	1	2	3	4	5	6	7	8	9	10
<b>21. Brothers &amp; Sisters</b>	1	2	3	4	5	6	7	8	9	10

**22. Are your parents providing financial support for college?**    1. Yes    2. No

**23. At this point in your education, what grades would you define as satisfactory for you?**

- |               |               |               |                        |
|---------------|---------------|---------------|------------------------|
| 1. A average  | 3. B+ average | 5. B- average | 7. C average           |
| 2. A- average | 4. B average  | 6. C+ average | 8. less than C average |

**Items 24-26.** Please use the scale below to indicate how many hours per week you plan to spend on each of the following activities during the 2000-20001 academic year.

	<1	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	≥ 25
<b>24. Classes and labs</b>	1	2	3	4	5	6	7	8	9	10
<b>25. Studying alone</b>	1	2	3	4	5	6	7	8	9	10
<b>26. Recreational/social activities</b>	1	2	3	4	5	6	7	8	9	10

**Items 27-32.** Please use the scale below to indicate how many hours per week you plan to spend on each of the following activities during the 2000-20001 academic year.

	<1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	> 17
27. Studying in groups	1	2	3	4	5	6	7	8	9	10
28. Talking with instructors outside of class	1	2	3	4	5	6	7	8	9	10
29. Talking with your advisor	1	2	3	4	5	6	7	8	9	10
30. Leadership roles	1	2	3	4	5	6	7	8	9	10
31. Community service/volunteer work	1	2	3	4	5	6	7	8	9	10
32. Paid work	1	2	3	4	5	6	7	8	9	10

33. How much do you know about other cultures or ethnic groups?

**Virtually no knowledge** 1 2 3 4 5 6 7 8 9 **Extremely knowledgeable**

34. How much experience do you have living with people from other cultures or ethnic groups?

**Virtually no experience** 1 2 3 4 5 6 7 8 9 **Many acquaintances and close friends from different cultures or ethnic backgrounds**

35. How comfortable are you interacting with people from other cultures or ethnic groups?

**Not at all comfortable** 1 2 3 4 5 6 7 8 9 **Very comfortable**

36. How important is it to you to develop friends from different cultural or ethnic groups and to become more knowledgeable about those cultures and groups?

**Not at all important** 1 2 3 4 5 6 7 8 9 **Extremely important**

37. What is the highest level of education you anticipate completing?

1. Bachelor's degree      2. Master's degree      3. Doctoral degree      4. Other

38. How many years do you plan to take to earn a bachelor's degree?

1. Three years or less      4. Four and one half years      7. Six Years  
2. Three and one half years      5. Five years      8. Six and one half years  
3. Four years      6. Five and one half years      9. Seven or more years

**Items 39-42.** For each of the following situations, please indicate what you think or would think by choosing **ONE** answer that best describes you. Do not spend too much time on any one item. We are most interested in your immediate reaction.

39. When I receive a poor grade, I usually believe the main reason for this is that:

a. I have low ability in this area of study.      c. The instructor had a tough grading scheme.  
b. I didn't study enough for the test/assignment.      d. I was the victim of bad luck.

40. When I find out I received a lower test score than my classmate, I usually believe the main reason for this is that:

a. I am not as smart as my classmate.      c. The instructor doesn't teach in ways I can understand.  
b. I didn't study as much as my classmate.      d. My classmate always gets all the luck.

41. When I "ace" an exam, I usually believe the main reason for this is that:
- a. I am very intelligent in this area.                      c. The instructor is great at teaching this material.  
b. I studied really hard for this test/assignment.        d. Whew! I was lucky this time!
42. When I receive a high grade in a class, I usually believe the main reason for this is that:
- a. I am very good at this subject matter.                      c. The instructor is an easy grader.  
b. I worked my tail off in this class.                              d. I was very fortunate.

**Items 43-63. Please rate your confidence in your ability to complete the following courses with a grade of "B" or better. Use the 9-point scale below, with higher numbers representing increasingly greater levels of confidence. Do not spend too much time on any one item. We are most interested in your immediate reaction.**

	<b>No confidence</b>									<b>Complete confidence</b>								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
43. Required courses IN your major	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
44. Basic English Composition	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
45. Advanced English Composition	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
46. Introductory Philosophy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
47. US History	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
48. Introduction to American Indian Studies	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
49. Fundamentals of Public Speaking	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
50. Computer Applications	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
51. Applied Computer Programming	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
52. Introduction to Probability and Matrices	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
53. Discrete Mathematics for Business	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
54. Principles of Statistics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
55. Human Anatomy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
56. Environmental Biology	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
57. General Physics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
58. General Chemistry	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
59. Introductory Psychology	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
60. Principles of Microeconomics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
61. Curriculum and Instruction	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
62. Religious Studies	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
63. Art History	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9

**PLEASE CONTINUE TO NEXT PAGE**

**Items 64-68.** You have enrolled at ISU with the intention of competing at least a bachelor's degree. How much encouragement and emotional support do you receive from each of the following people to achieve this educational goal? A person has a "negative influence" if he or she discourages you in some way from completing your education. A person has a "positive influence" if he or she actively encourages you to complete your education. A person has a "neutral influence" if he or she neither encourages nor discourages you from completing your education. If an item does not seem to apply to you, record a "10" (N/A). Do not spend too much time on any one item. We are most interested in your immediate reaction.

	negative influence		neutral influence			positive influence		not applicable
64. Mother	1	2	3	4	5	6	7	10
65. Father	1	2	3	4	5	6	7	10
66. Brother (s) & Sister (s)	1	2	3	4	5	6	7	10
67. Teacher (s)	1	2	3	4	5	6	7	10
68. Friend (s)	1	2	3	4	5	6	7	10

69. How strong was your desire to be placed in Maple Hall?

I was minimally interested    1   2   3   4   5   6   7   8   9    My heart was set on living in Maple

**Items 70-84.** Using the 9-point scale below, please indicate the degree to which each of the following influenced your decision to apply for placement in Maple Hall. Higher numbers indicate a greater degree of influence.

	Did not influence my decision at all					Greatly influenced my decision			
70. High School counselor's recommendation	1	2	3	4	5	6	7	8	9
71. Friends' decisions to apply to Maple	1	2	3	4	5	6	7	8	9
72. Overall quality of the physical facilities	1	2	3	4	5	6	7	8	9
73. Privacy of the bathrooms	1	2	3	4	5	6	7	8	9
74. Presence of computer labs on each floor	1	2	3	4	5	6	7	8	9
75. Availability of suites	1	2	3	4	5	6	7	8	9
76. Parents' recommendations	1	2	3	4	5	6	7	8	9
77. My learning team was assigned to Maple	1	2	3	4	5	6	7	8	9
78. No alcohol policy	1	2	3	4	5	6	7	8	9
79. No smoking policy	1	2	3	4	5	6	7	8	9
80. Limited visitation hours	1	2	3	4	5	6	7	8	9
81. Greater academic focus	1	2	3	4	5	6	7	8	9
82. Community service requirement	1	2	3	4	5	6	7	8	9
83. Personal development requirement	1	2	3	4	5	6	7	8	9
84. Campus organization requirement	1	2	3	4	5	6	7	8	9

**Please feel free to write down any suggestions or comments you have for the Maple Program on the reverse side of this page.**

**Thank you for completing this survey!**

**Larch Hall Background Questionnaire  
Fall Semester 2000**

**Record the following information directly on the provided bubble sheet using a #2 pencil.**

Write your social security number in the spaces labeled "Identification Number," and darken the appropriate circle below each digit. The last space will remain blank.

Darken the appropriate circles to record your birth date, sex, and year in college.

In the section labeled "Special Codes," a "1" has been entered under the letter "K" and the appropriate circle darkened in order to identify your residence hall. Under the letter "L," please enter the number of the floor on which you live and darken the appropriate circle.

**Respond to each of the following questions by darkening the appropriate circle on your bubble sheet for that question. Use a #2 pencil and be very careful not to get out of sequence on the bubble sheet.**

1. Are you a member of a learning community or learning team (e.g., BEST, PWISE, ACES)? 1. Yes 2. No  
If yes, write the name of your learning community or team in the top margin of your bubble sheet.
2. Which of the following best describes your race/ethnicity?  
 1. European American/Caucasian    3. African American    5. Native American/American Indian  
 2. Hispanic American    4. Asian American    6. Other
3. What was the approximate size of your graduating class in high school?  
 1. less than 100    3. 200 to 299    5. 400 to 499    7. 600 to 699  
 2. 100 to 199    4. 300 to 399    6. 500 to 599    8. 700 or more
4. What type of high school did you attend? 1. Public    2. Private    3. Home School
5. Was your high school? 1. Co-educational    2. All female    3. All male
6. How many leadership positions did you hold during high school?  
 1. None    2. One or two    3. Three or four    4. Five or six    5. More than six
7. How many community service experiences have you had?  
 1. None    2. One or two    3. Three or four    4. Five or six    5. More than six
8. How well do you think your high school prepared you for college?  
 1. very poorly    2. poorly    3. adequately    4. well    5. very well

**Items 9-10. Using the scale below, please indicate approximately how many of your acquaintances from high school are:**

	1	2	3	4	5	6	7	8	9 or more	none
9. enrolled at ISU this year?	1	2	3	4	5	6	7	8	9	10
10. living in the same residence hall house?	1	2	3	4	5	6	7	8	9	10

## 11. Where does your immediate family live?

- |   |  |
|---|--|
| 1. In a major city (pop. > 200,000)                     | 4. In a large town (pop. 10,000- 25,000)       |
| 2. In a city of moderate size ( pop. 100,000 - 200,000) | 5. In a small town (pop. < 10,000)             |
| 3. In a small city (pop. 25,000 - 100,000)              | 6. In the country or on a farm outside of town |

**Items 12-17.** Please use the scale below to record the **highest** level of education attained by each of the following relatives. If you are uncertain about the educational history of one of the relatives, make your best estimate. Respond to all individuals that apply, even if the person is now deceased.

	Less than high school	High school	Technical or Vocational school	Bachelor's degree	Master's degree	Doctoral degree
12. Biological or Adoptive Father	1	2	3	4	5	6
13. Biological or Adoptive Mother	1	2	3	4	5	6
14. Maternal Grandmother	1	2	3	4	5	6
15. Maternal Grandfather	1	2	3	4	5	6
16. Paternal Grandmother	1	2	3	4	5	6
17. Paternal Grandfather	1	2	3	4	5	6

**Items 18-21.** Please indicate how many of the following relatives are ISU alumni. Darken the "9" circle if the answer is "9 or more," and darken the last circle ("10") if the answer is "none".

	1	2	3	4	5	6	7	8	9 or more	none
18. Parents	1	2	3	4	5	6	7	8	9	10
19. Grandparents	1	2	3	4	5	6	7	8	9	10
20. Aunts & Uncles	1	2	3	4	5	6	7	8	9	10
21. Brothers & Sisters	1	2	3	4	5	6	7	8	9	10

22. Are your parents providing financial support for college? 1. Yes 2. No

23. At this point in your education, what grades would you define as satisfactory for you?

- |               |               |               |                        |
|---------------|---------------|---------------|------------------------|
| 1. A average  | 3. B+ average | 5. B- average | 7. C average           |
| 2. A- average | 4. B average  | 6. C+ average | 8. less than C average |

**Items 24-26.** Please use the scale below to indicate how many hours per week you plan to spend on each of the following activities during the 2000-20001 academic year.

	<1	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	≥25
24. Classes and labs	1	2	3	4	5	6	7	8	9	10
25. Studying alone	1	2	3	4	5	6	7	8	9	10
26. Recreational/social activities	1	2	3	4	5	6	7	8	9	10

**Items 27-32.** Please use the scale below to indicate how many hours per week you plan to spend on each of the following activities during the 2000-20001 academic year.

	<1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	> 17
27. Studying in groups	1	2	3	4	5	6	7	8	9	10
28. Talking with instructors outside of class	1	2	3	4	5	6	7	8	9	10
29. Talking with your advisor	1	2	3	4	5	6	7	8	9	10
30. Leadership roles	1	2	3	4	5	6	7	8	9	10
31. Community service/volunteer work	1	2	3	4	5	6	7	8	9	10
32. Paid work	1	2	3	4	5	6	7	8	9	10

33. How much do you know about other cultures or ethnic groups?

**Virtually no knowledge** 1 2 3 4 5 6 7 8 9 **Extremely knowledgeable**

34. How much experience do you have living with people from other cultures or ethnic groups?

**Virtually no experience** 1 2 3 4 5 6 7 8 9 **Many acquaintances and close friends from different cultures or ethnic backgrounds**

35. How comfortable are you interacting with people from other cultures or ethnic groups?

**Not at all comfortable** 1 2 3 4 5 6 7 8 9 **Very comfortable**

36. How important is it to you to develop friends from different cultural or ethnic groups and to become more knowledgeable about those cultures and groups?

**Not at all important** 1 2 3 4 5 6 7 8 9 **Extremely important**

37. What is the highest level of education you anticipate completing?

1. Bachelor's degree      2. Master's degree      3. Doctoral degree      4. Other

38. How many years do you plan to take to earn a bachelor's degree?

1. Three years or less      4. Four and one half years      7. Six Years  
2. Three and one half years      5. Five years      8. Six and one half years  
3. Four years      6. Five and one half years      9. Seven or more years

**Items 39-42.** For each of the following situations, please indicate what you think or would think by choosing **ONE** answer that best describes you. Do not spend too much time on any one item. We are most interested in your immediate reaction.

39. When I receive a poor grade, I usually believe the main reason for this is that:

a. I have low ability in this area of study.      c. The instructor had a tough grading scheme.  
b. I didn't study enough for the test/assignment.      d. I was the victim of bad luck.

40. When I find out I received a lower test score than my classmate, I usually believe the main reason for this is that:

a. I am not as smart as my classmate.      c. The instructor doesn't teach in ways I can understand.  
b. I didn't study as much as my classmate.      d. My classmate always gets all the luck.

41. When I "ace" an exam, I usually believe the main reason for this is that:
- a. I am very intelligent in this area.
  - b. I studied really hard for this test/assignment.
  - c. The instructor is great at teaching this material.
  - d. Whew! I was lucky this time!
42. When I receive a high grade in a class, I usually believe the main reason for this is that:
- a. I am very good at this subject matter.
  - b. I worked my tail off in this class.
  - c. The instructor is an easy grader.
  - d. I was very fortunate.

**Items 43–63.** Please rate your confidence in your ability to complete the following courses with a grade of "B" or better. Use the 9-point scale below, with higher numbers representing increasingly greater levels of confidence. Do not spend too much time on any one item. We are most interested in your immediate reaction.

	No confidence									Complete confidence								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
43. Required courses IN your major	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
44. Basic English Composition	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
45. Advanced English Composition	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
46. Introductory Philosophy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
47. US History	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
48. Introduction to American Indian Studies	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
49. Fundamentals of Public Speaking	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
50. Computer Applications	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
51. Applied Computer Programming	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
52. Introduction to Probability and Matrices	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
53. Discrete Mathematics for Business	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
54. Principles of Statistics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
55. Human Anatomy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
56. Environmental Biology	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
57. General Physics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
58. General Chemistry	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
59. Introductory Psychology	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
60. Principles of Microeconomics	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
61. Curriculum and Instruction	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
62. Religious Studies	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
63. Art History	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9

**Please feel free to write down any suggestions or comments you have for Larch Hall on the reverse side of this page.**

**Thank you for completing this survey!**

**APPENDIX B**  
**INFORMED CONSENT STATEMENT**

**Informed Consent Statement**

**(Read to Maple, & Larch Residents Prior to Administration of the Year-End Surveys)**

**We have been asked by the department of residence to evaluate certain aspects of residence hall life. Your participation will be greatly appreciated. Completion of this survey is completely voluntary. Identifying information will be removed and discarded once data entry is complete and the prize drawing has taken place. Individuals who return completed surveys by the deadline will have a chance to win one of three \$100 gift certificates to North Grand Mall. If you have any questions or comments, please contact Sharon Thompson or Doug Epperson. Their contact information appears at the bottom of the letter that is attached to the front of your survey.**

**APPENDIX C**  
**SPRING SURVEYS**

**Year-end Survey: Maple Residents**

Please provide your full name and social security number. As mentioned in the letter, this information will only be used to match your current responses to those that you provided at the beginning of the fall semester. As soon as the match has been made, this portion of the questionnaire will be removed and discarded. If you did not complete a questionnaire last semester, we are still very interested in your responses.

Name \_\_\_\_\_ Social Security Number \_\_\_\_\_

**Note. The identifying information above will be removed and discarded after a research identification number has been assigned to your responses.**

---

**Items 1-4. Please circle the most appropriate response to each of the following questions and provide clarifying comments as needed.**

1. If there were no restrictions on who could live in Maple next year, would you choose to return? (Circle one).

definitely no      probably no      uncertain      probably yes      definitely yes

If not, why not? \_\_\_\_\_

---

2. Would you recommend Maple Hall to incoming freshmen? (Circle one.)

definitely no      probably no      uncertain      probably yes      definitely yes

If not, why not? \_\_\_\_\_

---

3. If you could have decided how many upperclassmen would live Maple Hall while you were there, what percentage would you have chosen? (Circle one.)

0%      10%      25%      50%      75%      90%

Comments: \_\_\_\_\_

---

4. Who made the decision for you to live in Maple? (Circle one.)

you      your parent(s)/guardian(s)      joint decision      Maple was not your first choice

Comments: \_\_\_\_\_

---

5. Please estimate the number of times your parent(s)/guardian(s) visited you at Maple Hall during the 2000-2001 academic year? \_\_\_\_\_

**Items 6-8. Please use the provided scale to rate your satisfaction with each of the following Maple Hall policies:**

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
6. visitation	1	2	3	4	5
7. quiet hours	1	2	3	4	5
8. substance-free	1	2	3	4	5

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Items 9-12. Please use the provided scale to rate your satisfaction with each of the following Maple Hall requirements:**

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
9. GPA requirement (2.5)	1	2	3	4	5
10. campus involvement	1	2	3	4	5
11. personal development	1	2	3	4	5
12. community service	1	2	3	4	5

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Items 13-20. Please use the provided scale to rate your satisfaction with each of the following Maple facilities:**

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
13. computer labs	1	2	3	4	5
14. furniture in your room	1	2	3	4	5
15. furniture in common areas	1	2	3	4	5
16. study areas	1	2	3	4	5
17. kitchenette	1	2	3	4	5
18. overall facilities	1	2	3	4	5

19. How often do you use the Maple computer labs? (Circle one.)

daily    3 times/wk    2 times/wk    1 time/wk    1 time/mo    rarely or never

20. How often do you take advantage of the study areas available in Maple? (Circle one.)

daily    3 times/wk    2 times/wk    1 time/wk    1 time/mo    rarely or never

Comments: \_\_\_\_\_  
 \_\_\_\_\_

**Items 21-24. Please use the provided scale to rate your agreement with the following statements:**

	strongly disagree	disagree	neutral	agree	strongly agree
21. The physical facilities in Maple encouraged the development of a sense of community among residents.	1	2	3	4	5
22. The policies in Maple encouraged the development of a sense of community among residents.	1	2	3	4	5
23. The physical facilities in Maple helped create an academically supportive environment in the hall.	1	2	3	4	5
24. The policies in Maple helped create an academically supportive environment in the hall.	1	2	3	4	5

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Items 25-33. Please use the provided scale to rate your agreement with the following statements regarding your Community Assistant (CA):**

	strongly disagree	disagree	neutral	agree	strongly agree
25. My CA is available in the house	1	2	3	4	5
26. My CA promotes and encourages relations with all people, regardless of values, race, religion, sexual orientation, or background.	1	2	3	4	5
27. My CA shows enthusiasm for his/her job.	1	2	3	4	5
28. I feel comfortable approaching my CA with a confidential matter.	1	2	3	4	5
29. My CA encourages residents to be responsible for their actions (e.g., noise, care for facilities).	1	2	3	4	5
30. My CA enforces policies in an appropriate manner.	1	2 3	4	5	
31. My CA promotes an environment in which individual differences are respected.	1	2 3	4	5	
32. How often have you interacted with your CA this semester? (Circle one.)					
	0-5 times	6-10 times	11-15 times	16-20 times	21+ times

33. How satisfied are you with your CA this semester? (Circle one)

very dissatisfied      dissatisfied      neutral      satisfied      very satisfied

Comments: \_\_\_\_\_

\_\_\_\_\_

**Items 34-43. Please use the scale provided to rate your agreement with the following statements regarding your Academic Resource Coordinator (ARC):**

	strongly disagree	disagree	neutral	agree	strongly agree
34. My ARC is available in the house	1	2	3	4	5
35. My ARC relates well with all people, regardless of values, race, religion, sexual orientation, or background.	1	2	3	4	5
36. My ARC shows enthusiasm for his/her job.	1	2	3	4	5
37. My ARC is a good person to direct me for help about academic concerns.	1	2	3	4	5
38. I consider my ARC knowledgeable of academic and support services on campus and in the community.	1	2	3	4	5
39. My ARC meets with me monthly to discuss academic issues.	1	2	3	4	5
40. I have found the monthly meetings with my ARC to be beneficial to me.	1	2	3	4	5
41. My ARC coordinates academic programs for our house that are beneficial to me.	1	2	3	4	5

42. How often have you interacted with your ARC this semester? (Circle one.)

0-5 times      6-10 times      11-15 times      16-20 times      21+ times

43. How satisfied are you with your ARC this semester? (Circle one.)

very dissatisfied      dissatisfied      neutral      satisfied      very satisfied

Comments: \_\_\_\_\_

\_\_\_\_\_

**Items 44-45. Please use the provided scale to rate your satisfaction with each of the following persons:**

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
44. your peer mentor (if applicable)	1	2	3	4	5
45. the Maple hall director (Heather Phillips)	1	2	3	4	5

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

46. At this point in your education, what grades would you define as satisfactory for you?  
 (Circle one.)

- |            |            |                     |
|------------|------------|---------------------|
| A average  | B+ average | C+ average          |
| A- average | B average  | C average           |
|            | B- average | less than C average |

**Items 47-49. Please use the scale below to indicate the number of hours per week you spent on each of the following activities during the 2000-2001 academic year.**

	<1	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	≥ 25
47. Classes and labs	1	2	3	4	5	6	7	8	9	10
48. Studying alone	1	2	3	4	5	6	7	8	9	10
49. Recreational/ social activities	1	2	3	4	5	6	7	8	9	10

**Items 50-55. Please use the scale below to indicate the number of hours per week you spent on each of the following activities during the 2000-2001 academic year.**

	<1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	> 17
50. Studying in groups	1	2	3	4	5	6	7	8	9	10
51. Talking with teachers outside of class	1	2	3	4	5	6	7	8	9	10
52. Talking with your advisor	1	2	3	4	5	6	7	8	9	10
53. Leadership roles	1	2	3	4	5	6	7	8	9	10
54. Community service/ volunteer work	1	2	3	4	5	6	7	8	9	10
55. Paid work	1	2	3	4	5	6	7	8	9	10

56. Please indicate the number of personal development activities in which you participated during the 2000-2001 academic year. \_\_\_\_\_
57. Please indicated the number of campus organizations in which you were involved during the 2000-2001 academic year. \_\_\_\_\_

**Items 58-61. Please use the provided scales to respond to the following questions:**

58. How much do you know about other cultures or ethnic groups?  
**Virtually no knowledge** 1 2 3 4 5 6 7 8 9 **Extremely knowledgeable**
59. How much experience do you have living with people from other cultures or ethnic groups?  
**Virtually no experience** 1 2 3 4 5 6 7 8 9 **Many acquaintances and close friends from different cultures/ethnic backgrounds**
60. How comfortable are you interacting with people from other cultures or ethnic groups?  
**Not at all comfortable** 1 2 3 4 5 6 7 8 9 **Very comfortable**
61. How important is it to you to develop friends from different cultural or ethnic groups and to become more knowledgeable about those cultures and groups?  
**Not at all important** 1 2 3 4 5 6 7 8 9 **Extremely important**

**Items 61-64. For each of the following situations, please indicate what you think or would think by choosing ONE answer that best describes you. Do not spend too much time on any one item. We are most interested in your immediate reaction.**

61. When I receive a poor grade, I usually believe the main reason for this is that:
- |   |   |
|---|---|
| a. I have low ability in this area of study.      | c. The instructor had a tough grading scheme. |
| b. I didn't study enough for the test/assignment. | d. I was the victim of bad luck.              |
62. When I find out I received a lower test score than my classmate, I usually believe the main reason is that:
- |  |   |
|--|---|
| a. I am not as smart as my classmate.      | c. The instructor doesn't teach in ways I can understand. |
| b. I didn't study as much as my classmate. | d. My classmate always gets all the luck.                 |
63. When I "ace" an exam, I usually believe the main reason for this is that:
- |  |   |
|--|---|
| a. I am very intelligent in this area.             | c. The instructor is great at teaching this material. |
| b. I studied really hard for this test/assignment. | d. Whew! I was lucky this time!                       |
64. When I receive a high grade in a class, I usually believe the main reason for this is that:
- |   |                                      |
|---|--------------------------------------|
| a. I am very good at this subject matter. | c. The instructor is an easy grader. |
| b. I worked my tail off in this class.    | d. I was very fortunate.             |

**Items 65–85. Please rate your confidence in your ability to complete the following courses with a grade of “B” or better. Use the 9-point scale below, with higher numbers representing increasingly greater levels of confidence. Do not spend too much time on any one item. We are most interested in your immediate reaction.**

	<b>No confidence</b>								<b>Complete confidence</b>
	1	2	3	4	5	6	7	8	9
65. Required courses IN your major	1	2	3	4	5	6	7	8	9
66. Basic English Composition	1	2	3	4	5	6	7	8	9
67. Advanced English Composition	1	2	3	4	5	6	7	8	9
68. Introductory Philosophy	1	2	3	4	5	6	7	8	9
69. US History	1	2	3	4	5	6	7	8	9
70. Introduction to American Indian Studies	1	2	3	4	5	6	7	8	9
71. Fundamentals of Public Speaking	1	2	3	4	5	6	7	8	9
72. Computer Applications	1	2	3	4	5	6	7	8	9
73. Applied Computer Programming	1	2	3	4	5	6	7	8	9
74. Introduction to Probability and Matrices	1	2	3	4	5	6	7	8	9
75. Discrete Mathematics for Business	1	2	3	4	5	6	7	8	9
76. Principles of Statistics	1	2	3	4	5	6	7	8	9
77. Human Anatomy	1	2	3	4	5	6	7	8	9
78. Environmental Biology	1	2	3	4	5	6	7	8	9
79. General Physics	1	2	3	4	5	6	7	8	9
80. General Chemistry	1	2	3	4	5	6	7	8	9
81. Introductory Psychology	1	2	3	4	5	6	7	8	9
82. Principles of Macroeconomics	1	2	3	4	5	6	7	8	9
83. Curriculum and Instruction	1	2	3	4	5	6	7	8	9
84. Religious Studies	1	2	3	4	5	6	7	8	9
85. Art History	1	2	3	4	5	6	7	8	9

**Please feel free to write down any suggestions or comments you have for the Maple Program in the space below or on the reverse side of this page.**

**Thank you for completing this survey.**

**2001 Year-end Survey: Larch Residents**

**General Directions.** All responses should be made on the provided bubble sheet. For each item, please select the most appropriate response and darken the corresponding circle on your bubble sheet. Please use a #2 pencil and be careful that you do not get out of order on your answer sheet.

**Identifying Information.** Please enter your full name and social security number into the appropriate boxes on your answer sheet and darken the corresponding circles. As mentioned in the letter, this information will only be used to match your current responses to those that you provided at the beginning of the fall semester. As soon as the match has been made, the identifying portion of your bubble sheet will be removed and discarded. If you did not complete a questionnaire last semester, we are still very interested in your responses. **We will remove and discard the identifying portion of your bubble sheet after we have assigned a research identification number to your responses.**

**Items 1-4.** Please choose the most appropriate response for each item and darken the corresponding circle on your bubble sheet.

1. Would you choose to live in Larch again next year?  
 1. definitely no    2. probably no    3. uncertain    4. probably yes    5. definitely yes
2. Would you recommend Larch to incoming freshmen?  
 1. definitely no    2. probably no    3. uncertain    4. probably yes    5. definitely yes
3. If you could have decided how many upperclassmen would live in Larch while you were there, what percentage would you have chosen?  
 1. 0%    2. 10%    3. 25%    4. 50%    5. 75%    6. 90%
4. Who made the decision for you to live in Larch?  
 1. you    2. your parent(s)/guardian(s)    3. joint decision    4. was not your first choice
5. Please estimate the number of times your parent(s)/guardian(s) visited you at Willow during the 2000-2001 academic year. \_\_\_\_\_

**Items 6-8.** Please use the provided scale to rate your satisfaction with Larch Hall's policies and practices in each of the following areas:

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
6. visitation	1	2	3	4	5
7. quiet hours	1	2	3	4	5
8. substance use	1	2	3	4	5

**Items 9-13. Please use the provided scale to rate your satisfaction with each of the following facilities in Larch:**

	very dissatisfied	dissatisfied	neutral	satisfied	very satisfied
9. computer labs	1	2	3	4	5
10. furniture in your room	1	2	3	4	5
11. furniture in common areas	1	2	3	4	5
12. study areas	1	2	3	4	5
13. overall facilities	1	2	3	4	5

**14. How often do you take advantage of the study areas available in Larch?**

1. daily    2. 3 times/wk    3. 2 times/wk    4. 1 time/wk    5. 1 time/mo    6. rarely or never

**Items 15-18. Please use the provided scale to rate your agreement with the following statements:**

	strongly disagree	disagree	neutral	agree	strongly agree
15. The physical facilities in Larch encouraged the development of a sense of community among residents.	1	2	3	4	5
16. The policies in Larch encouraged the development of a sense of community among residents.	1	2	3	4	5
17. The physical facilities in Larch helped create an academically supportive environment in the hall.	1	2	3	4	5
18. The policies in Larch helped create an academically supportive environment in the hall.	1	2	3	4	5

**Items 19-27. Please use the provided scale to rate your agreement with the following statements regarding your RA:**

	strongly disagree	disagree	neutral	agree	strongly agree
19. My RA is available in the house.	1	2	3	4	5
20. My RA promotes and encourages relations with all people, regardless of values, race, religion, sexual orientation, or background.	1	2	3	4	5
21. My RA shows enthusiasm for his/her job.	1	2	3	4	5
22. I feel comfortable approaching my RA with a confidential matter.	1	2	3	4	5
23. My RA encourages residents to be responsible for their actions (e.g., noise, care for facilities).	1	2	3	4	5

- |  | strongly<br>disagree | disagree        | neutral        | agree          | strongly<br>agree |
|--|----------------------|-----------------|----------------|----------------|-------------------|
| 24. My RA enforces policies in an appropriate manner.                            | 1                    | 2               | 3              | 4              | 5                 |
| 25. My RA promotes an environment in which individual differences are respected. | 1                    | 2               | 3              | 4              | 5                 |
| 26. How often have you interacted with your RA this semester?                    |                      |                 |                |                |                   |
|  | 1. 0-5 times         | 2. 6-10 times   | 3. 11-15 times | 4. 16-20 times | 5. 21+ times      |
| 27. How satisfied are you with your RA this semester?                            |                      |                 |                |                |                   |
|  | 1. very dissatisfied | 2. dissatisfied | 3. neutral     | 4. satisfied   | 5. very satisfied |

**Items 28-29. Please choose the most appropriate response to each item and darken the corresponding circle on your bubble sheet.**

28. How satisfied are you with the Larch hall director (Ken Smith) this semester?
1. very dissatisfied    2. dissatisfied    3. neutral    4. satisfied    5. very satisfied
29. At this point in your education, what grades would you define as satisfactory for you?
1. A average                      3. B+ average                      6. C average  
2. A- average                      4. B- average                      7. C+ average  
5. B average                      8. less than C average

30. Please indicate the number of personal development activities in which you participated during the 2000-2001 academic year. \_\_\_\_\_
31. Please indicated the number of campus organizations in which you were involved during the 2000-2001 academic year. \_\_\_\_\_

**Items 32-34. Please use the scale below to indicate the number of hours per week you spent on each of the following activities during the 2000-20001 academic year.**

	<1	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	≥ 25
32. Classes and labs	1	2	3	4	5	6	7	8	9	10
33. Studying alone	1	2	3	4	5	6	7	8	9	10
34. Recreational/social activities	1	2	3	4	5	6	7	8	9	10

**Items 35–40. Please use the scale below to indicate the number of hours per week you spent on each of the following activities during the 2000-2001 academic year.**

	<1	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	> 17
35. Studying in groups	1	2	3	4	5	6	7	8	9	10
36. Talking with instructors outside of class	1	2	3	4	5	6	7	8	9	10
37. Talking with your advisor	1	2	3	4	5	6	7	8	9	10
38. Leadership roles	1	2	3	4	5	6	7	8	9	10
39. Community service/volunteer work	1	2	3	4	5	6	7	8	9	10
40. Paid work	1	2	3	4	5	6	7	8	9	10

41. Please indicate the number of personal development activities in which you participated during the 2000-2001 academic year. \_\_\_\_\_

42. Please indicated the number of campus organizations in which you were involved during the 2000-2001 academic year. \_\_\_\_\_

**Items 43–46. Please use the provided scales to respond to the following questions:**

43. How much do you know about other cultures or ethnic groups?

**Virtually no knowledge** 1 2 3 4 5 6 7 8 9 **Extremely knowledgeable**

44. How much experience do you have living with people from other cultures or ethnic groups?

**Virtually no experience** 1 2 3 4 5 6 7 8 9 **Many acquaintances and close friends from different cultures or ethnic backgrounds**

45. How comfortable are you interacting with people from other cultures or ethnic groups?

**Not at all comfortable** 1 2 3 4 5 6 7 8 9 **Very comfortable**

46. How important is it to you to develop friends from different cultural or ethnic groups and to become more knowledgeable about those cultures and groups?

**Not at all important** 1 2 3 4 5 6 7 8 9 **Extremely important**

**Items 47-50. For each of the following situations, please indicate what you think or would think by choosing ONE answer that best describes you. Do not spend too much time on any one item. We are most interested in your immediate reaction.**

47. When I receive a poor grade, I usually believe the main reason for this is that:

1. I have low ability in this area of study.                      3. The instructor had a tough grading scheme.  
2. I didn't study enough for the test/assignment      4. I was the victim of bad luck.

48. When I find out I received a lower test score than my classmate, I usually believe the main reason for this is that:

1. I am not as smart as my classmate.                      3. The instructor doesn't teach in ways I can understand.  
2. I didn't study as much as my classmate.                      4. My classmate always gets all the luck.

49. When I “ace” an exam, I usually believe the main reason for this is that:
1. I am very intelligent in this area.
  2. I studied really hard for this test/ assignment.
  3. The instructor is great at teaching this material.
  4. Whew! I was lucky this time!
50. When I receive a high grade in a class, I usually believe the main reason for this is that:
1. I am very good at this subject matter.
  2. I worked my tail off in this class.
  3. The instructor is an easy grader.
  4. I was very fortunate.

**Items 51-72. Please rate your confidence in your ability to complete the following courses with a grade of “B” or better. Use the 9-point scale below, with higher numbers representing increasingly greater levels of confidence. Do not spend too much time on any one item. We are most interested in your immediate reaction. Please be careful that you do not get out of order on your bubble sheet.**

	No confidence								Complete confidence
51. Required courses IN your major	1	2	3	4	5	6	7	8	9
52. Basic English Composition	1	2	3	4	5	6	7	8	9
53. Advanced English Composition	1	2	3	4	5	6	7	8	9
54. Introductory Philosophy	1	2	3	4	5	6	7	8	9
55. US History	1	2	3	4	5	6	7	8	9
56. Introduction to American Indian Studies	1	2	3	4	5	6	7	8	9
57. Fundamentals of Public Speaking	1	2	3	4	5	6	7	8	9
58. Computer Applications	1	2	3	4	5	6	7	8	9
59. Applied Computer Programming	1	2	3	4	5	6	7	8	9
60. Introduction to Probability and Matrices	1	2	3	4	5	6	7	8	9
61. Discrete Mathematics for Business	1	2	3	4	5	6	7	8	9
62. Principles of Statistics	1	2	3	4	5	6	7	8	9
63. Human Anatomy	1	2	3	4	5	6	7	8	9
64. Environmental Biology	1	2	3	4	5	6	7	8	9
65. General Physics	1	2	3	4	5	6	7	8	9
66. General Chemistry	1	2	3	4	5	6	7	8	9
67. Introductory Psychology	1	2	3	4	5	6	7	8	9
69. Principles of Macroeconomics	1	2	3	4	5	6	7	8	9
70. Curriculum and Instruction	1	2	3	4	5	6	7	8	9
71. Religious Studies	1	2	3	4	5	6	7	8	9
72. Art History	1	2	3	4	5	6	7	8	9

**Please feel free to write down any suggestions or comments you have  
for Larch Hall in the space below**

**Thank you for completing this survey!**

**APPENDIX D**  
**COVER LETTERS**

**IOWA STATE UNIVERSITY**

OF SCIENCE AND TECHNOLOGY  
College of Liberal Arts and Sciences  
Department of Psychology

March 26, 2001

Dear Maple Resident,

As you may know, Maple Hall was designed to be a living/learning community that fosters intellectual and personal growth and provides an atmosphere that is supportive of your academic endeavors. We are interested in determining the extent to which that goal is being achieved. The answers you provide to the attached questionnaire will greatly help us with that evaluation process. In addition, **your feedback will provide valuable information that will help guide future decisions about Maple Hall.** We know that this is a busy time of year for you, so we are offering the chance to win **one of three \$100 gift certificates to North Grand Mall** as an additional incentive for participation. The drawing will be held on April 27, 2001. Everyone who has returned a completed questionnaire by April 27 will be included in the drawing.

The confidentiality of the information you provide will be ensured in several ways. First, the survey data will be entered into the computer and compiled by individuals who are not residence hall staff. Second, as soon as your questionnaire has been matched to the responses you provided on last semester's background questionnaire, the part of the questionnaire containing your name will be removed and discarded. If you did not complete a questionnaire last semester, we are still very interested in your responses. We will remove and discard the identifying portion of your questionnaire after we have assigned a research identification number to your responses. Finally, the residence hall system will only receive summary data based on the responses of everyone who participates. No individual information will be shared.

We hope you will take advantage of this opportunity to share your feedback with us. If you have any questions or concerns, please feel free to contact Sharon Thompson or Doug Epperson. Our contact information is listed below.

You may return your completed questionnaire by placing it in the drop box at the desk in the Maple-Willow-Larch Commons. If you prefer, you may return your survey to Sharon Thompson via campus mail at W117 Lagomarcino Hall. Thank you in advance for your participation. Please feel free to contact us with any questions.

Thank you in advance for your participation.

Sincerely,

Sharon Thompson  
sthomps@iastate.edu  
296-2735

Douglas L. Epperson  
dle@iastate.edu  
294-2047

**IOWA STATE UNIVERSITY**

OF SCIENCE AND TECHNOLOGY  
College of Liberal Arts and Sciences  
Department of Psychology

March 26, 2001

Dear Larch Resident:

We are interested in evaluating certain aspects of residence hall life. Your responses to the following survey will provide valuable information that may help guide future decisions about residence halls on campus. Some of you may have completed a similar survey last semester. If so, it is very important that we get this follow-up information. Even if you did not complete the survey last semester, your participation with this survey will be greatly appreciated.

The confidentiality of the information you provide will be ensured in several ways. First, the survey data will be entered into the computer and compiled by individuals who are not residence hall staff. Second, as soon as your questionnaire has been matched to the responses you provided on last semester's background questionnaire, the part of the bubble sheet that contains your identifying information will be removed and discarded. If you did not complete a questionnaire last semester, we are still very interested in your responses. We will remove and discard the identifying portion of your bubble sheet after we have assigned a research identification number to your responses. Finally, the residence hall system will only receive summary data based on the responses of everyone who participates. No individual information will be shared.

This survey will take only 15 minutes to complete, so we hope you will take advantage of this opportunity to share your feedback with us. We know that this is a busy time of year for you, so we are offering the chance to win **one of three \$100 gift certificates to North Grand Mall** as an additional incentive for participation. The drawing will be held on April 27, 2001. Everyone who has returned a completed questionnaire by April 27 will be included in the drawing.

You may return your completed questionnaire by placing it in the drop box at the desk in the Maple-Willow-Larch Commons. If you prefer, you may return your survey to Sharon Thompson via campus mail at W113 Lagomarcino Hall. Thank you in advance for your participation. Please feel free to contact us with any questions.

Sincerely:

Sharon Thompson  
sthomps@iastate.edu  
296-2735

Douglas L. Epperson  
dle@iastate.edu  
294-2047

**APPENDIX E**  
**RESIDENT REMINDER**

Dear Maple or Larch Resident,

A few weeks ago you received a survey about your academic and residence hall experience during the 2000-2001 school year. If you have already completed and returned the survey, thank you for your time. Your responses are very important to us. If you have not yet completed the survey, please take a few moments to do so now. There is a drop box for your convenience at the desk in the M-W-L commons. Everyone who returns a completed survey by 5:00 p.m. on Friday, April 27 will be entered into a prize drawing for the chance to win one of three \$100 gift certificates to North Grand Mall. Please contact Sharon Thompson or Doug Epperson if you have questions or need another survey.

Thank you.

Sharon Thompson, M.S.  
[sthomps@iastate.edu](mailto:sthomps@iastate.edu)  
296-2735

Douglas L. Epperson, Ph.D.  
[dle@iastate.edu](mailto:dle@iastate.edu)  
294-2047

**APPENDIX F**

**ITEM GROUPINGS FOR ACADEMIC SELF-EFFICACY SCALE**

### Item Groupings for Academic Self-Efficacy Scale

#### Academic Self-Efficacy

1. Required courses **IN your major**
2. Basic English Composition
3. Advanced English Composition
4. Introductory Philosophy
5. US History
6. Introduction to American Indian Studies
7. Fundamentals of Public Speaking
8. Computer Applications
9. Applied Computer Programming
10. Introduction to Probability and Matrices
11. Discrete Mathematics for Business
12. Principles of Statistics
13. Human Anatomy
14. Environmental Biology
15. General Physics
16. General Chemistry
17. Introductory Psychology
18. Principles of Microeconomics
19. Curriculum and Instruction
20. Religious Studies
21. Art History

#### Basic Academic Self-Efficacy

1. Basic English Composition
2. Advanced English Composition
3. Introductory Philosophy
4. US History
5. Introduction to American Indian Studies
6. Fundamentals of Public Speaking
7. Introductory Psychology
8. Religious Studies
9. Art History

#### Math Self-Efficacy

1. Computer Applications
2. Applied Computer Programming
3. Introduction to Probability and Matrices
4. Discrete Mathematics for Business
5. Principles of Statistics
6. Principles of Microeconomics

#### Science Self-Efficacy

1. Human Anatomy
2. Environmental Biology
3. General Physics
4. General Chemistry

**APPENDIX G**

**ITEM GROUPINGS FOR SATISFACTION SCALES**

### Item Groupings for Satisfaction Scales

#### Satisfaction with Policies Scale Items

22. Satisfaction with the visitation policy
23. Satisfaction with the quiet hours policy
24. Satisfaction with the substance-free policy

Degree of agreement with the following statements:

25. The policies in Maple/Larch encouraged the development of a sense of community among residents.
26. The policies in Maple/Larch helped create an academically supportive environment in the hall.

#### Satisfaction with Facilities Scale Items

10. Satisfaction with the computer labs
11. Satisfaction with the furniture in rooms
12. Satisfaction with the furniture in common areas
13. Satisfaction with the study areas
14. Satisfaction with the overall facilities

Degree of agreement with the following statements:

15. The physical facilities in Maple/Larch encouraged the development of a sense of community among residents.
16. The physical facilities in Maple/Larch helped create an academically supportive environment in the hall.

#### Satisfaction with Staff Scale Items

7. Satisfaction with Community Assistant (CA, for Maple residents)/Resident Assistant (RA, for Larch residents)
8. Satisfaction with Academic Resource Coordinator (ARC, Maple residents only)

**9. Satisfaction with Hall Director**

**Degree of agreement with the following statements:**

10. My CA/RA is available in the house.
11. My CA/RA promotes and encourages relations with all people, regardless of values, race, religion, sexual orientation, or background.
12. My CA/RA shows enthusiasm for his/her job.
13. I feel comfortable approaching my CA/RA with a confidential matter.
14. My CA/RA encourages residents to be responsible for their actions (e.g., noise, care for facilities).
15. My CA/RA enforces policies in an appropriate manner.
16. My CA/RA promotes an environment in which individual differences are respected.
17. My ARC is available in the house.
18. My ARC related well with all people, regardless of values, race, religion, sexual orientation, or background.
19. My ARC shows enthusiasm for his/her job.
20. My ARC is a good person to direct me for help about academic concerns.
21. I consider my ARC knowledgeable of academic and support services on campus and in the community.
22. My ARC meets with me monthly to discuss academic issues.
23. I have found the monthly meetings with my ARC to be beneficial to me.
24. My ARC coordinates academic programs for our house that are beneficial to me.

---

**Note.** Responses to each item consisted of a 5-point Likert-type scale ranging from 1=very dissatisfied to 5=very satisfied or from 1=strongly disagree to 5=strongly agree.

**Scores for Satisfaction with Policies and Satisfaction with Facilities scales were**

computed by averaging across responses for each item in the scale. For the Satisfaction with Staff scale, scores for Larch residents were computed using the following formula: (average of satisfaction with RA item scores + satisfaction with hall director item score)/2. Scores for Maple residents were computed as follows: (average for satisfaction with CA item scores + average for satisfaction with ARC item scores + satisfaction with hall director item score)/3.

**APPENDIX H**

**NON-SIGNIFICANT BACKGROUND VARIABLES – TOTAL SAMPLE**

## Appendix H. Non-Significant Background Variables – Total Sample

	<i>n</i>	<i>%</i>
<b>Gender</b>		
Males	446	52.7
Females	401	47.3
<b>Ethnicity</b>		
European American	760	89.7
Other	73	8.6
	<i>M</i>	<i>SD</i>
<b>High School Rank</b>	77.95	17.87
<b>ACT-C</b>	25.04	4.32

*Note.* Percentages may not sum to 100 due to missing data.

**APPENDIX I**  
**NON-SIGNIFICANT BACKGROUND VARIABLES –**  
**BACKGROUND SURVEY SAMPLE**

## Appendix I. Non-Significant Background Variables – Background Survey Sample

	<i>n</i>	%
<b>Gender</b>		
Males	227	48.7
Females	239	51.3
<b>Ethnicity</b>		
European American	427	91.6
Other	39	8.4
<b>High School Type</b>		
Public	437	93.8
Private	26	5.6
<b>Father's Education Level</b>		
High school or less	137	29.4
Technical/vocational school	91	19.5
Bachelor's degree	155	33.3
Graduate degree	78	16.9
<b>Mother's Education Level</b>		
High school or less	137	29.4
Technical/vocational school	99	21.2
Bachelor's degree	166	35.6
Graduate degree	59	12.7
<b>Maternal Grandmother's Education Level</b>		
Less than high school	43	9.2
High school	282	60.5
More than high school	125	26.8

*Note.* Percentages may not sum to 100 due to missing data.

## Appendix I. (continued)

	<i>n</i>	<i>%</i>
<b>Maternal Grandfather's Education Level</b>		
Less than high school	45	9.7
High school	274	58.8
More than high school	132	28.3
<b>Paternal Grandfather's Education Level</b>		
Less than high school	56	12.4
High school	273	58.6
More than high school	124	26.6
<b>Parents Provide Financial Support</b>		
Yes	344	73.8
No	118	25.3
<b>Anticipated Highest Level of Education</b>		
Bachelor's Degree	161	34.5
Master's Degree	198	42.5
Doctoral Degree	95	20.4
	<i>M</i>	<i>SD</i>
<b>High School Rank</b>	79.59	16.41
<b>ACT-Composite Score</b>	25.02	4.23
<b>Leadership Experiences During High School</b>	2.53	1.20
<b>Perceived Adequacy of Preparation for College</b>	3.60	0.86
<b>High School Acquaintances at ISU</b>	6.05	3.35

*Note.* Percentages may not sum to 100 due to missing data.

## Appendix I. (continued)

	<i>M</i>	<i>SD</i>
<b>High School Acquaintances in Hall</b>	1.27	1.80
<b>Number of Parents Who Are ISU Alumni</b>	0.30	0.62
<b>Number of Grandparents Who Are ISU Alumni</b>	0.10	0.38
<b>Number of Aunts &amp; Uncles Who Are ISU Alumni</b>	0.83	1.55
<b>Number of Siblings Who Are ISU Alumni</b>	0.17	0.52
<b>Grades Perceived as Satisfactory</b>	2.89	1.31
<b>Knowledge of Other Cultures/Ethnicities</b>	4.78	1.91
<b>Experience with Diverse People</b>	3.88	2.62
<b>Perceived Importance of Multiculturalism</b>	5.33	2.24
<b>Anticipated Years to Completion of Bachelor's</b>	3.47	1.13
<b>Self-Efficacy for Required Courses in Major</b>	7.19	1.56
<b>Self-Efficacy for Basic Core Courses</b>	6.08	1.63
<b>Self-Efficacy for Math Courses</b>	5.94	1.79
<b>Self-Efficacy for Science Courses</b>	6.12	1.80

*Note.* Percentages may not sum to 100 due to missing data.

**APPENDIX J**  
**NON-SIGNIFICANT BACKGROUND VARIABLES –**  
**FINAL SURVEY SAMPLE**

## Appendix J. Non-Significant Background Variables – Final Survey Sample

	<i>n</i>	%
<b>Gender</b>		
Males	93	40.8
Females	135	59.2
<b>Ethnicity</b>		
European American	155	68.0
Other	73	32.0
<b>High School Type</b>		
Public	215	94.3
Private	10	4.4
<b>Father's Education Level</b>		
High school or less	69	30.3
Technical/vocational school	42	18.4
Bachelor's degree	77	33.8
Graduate degree	38	16.7
<b>Mother's Education Level</b>		
High school or less	69	30.5
Technical/vocational school	47	20.8
Bachelor's degree	75	33.2
Graduate degree	35	15.5
<b>Maternal Grandmother's Education Level</b>		
Less than high school	18	7.9
High school	142	62.3
More than high school	62	27.2

*Note.* Percentages may not sum to 100 due to missing data.

## Appendix J. (continued)

	<i>n</i>	%
<b>Maternal Grandfather's Education Level</b>		
Less than high school	22	9.6
High school	141	61.8
More than high school	59	25.9
<b>Paternal Grandmother's Education Level</b>		
Less than high school	23	10.1
High school	143	62.7
More than high school	55	24.1
<b>Paternal Grandfather's Education Level</b>		
Less than high school	32	14.0
High school	135	59.2
More than high school	55	24.1
<b>Parents Provide Financial Support</b>		
Yes	170	74.6
No	56	24.6
<b>Anticipated Highest Level of Education</b>		
Bachelor's Degree	80	35.1
Master's Degree	101	44.3
Doctoral Degree	42	18.4
	<i>M</i>	<i>SD</i>
<b>High School Rank</b>	79.67	16.45
<b>Size of High School Graduating Class</b>	2.45	1.66
<b>Leadership Experiences During High School</b>	2.63	1.25

*Note.* Percentages may not sum to 100 due to missing data.

## Appendix J. (continued)

	<i>M</i>	<i>SD</i>
<b>High School Acquaintances at ISU</b>	6.3	3.24
<b>High School Acquaintances in Hall</b>	1.23	1.74
<b>Size of Hometown</b>	4.27	1.71
<b>Number of Parents Who Are ISU Alumni</b>	0.32	0.64
<b>Number of Grandparents Who Are ISU Alumni</b>	0.09	0.33
<b>Number of Aunts &amp; Uncles Who Are ISU Alumni</b>	0.88	1.59
<b>Number of Siblings Who Are ISU Alumni</b>	0.20	0.52
<b>Grades Perceived as Satisfactory</b>	2.83	1.31
<b>Knowledge of Other Cultures/Ethnicities</b>	4.79	1.81
<b>Experience with Diverse People</b>	3.91	2.55
<b>Comfort Interacting with Diverse People</b>	6.71	2.23
<b>Perceived Importance of Multiculturalism</b>	5.29	2.08
<b>Anticipated Years to Completion of Bachelor's</b>	3.48	1.07
<b>Self-Efficacy for Required Courses in Major</b>	7.16	1.50
<b>Self-Efficacy for Basic Core Courses</b>	5.98	1.68
<b>Self-Efficacy for Math Courses</b>	5.86	1.76
<b>Self-Efficacy for Science Courses</b>	5.94	1.91

*Note.* Percentages may not sum to 100 due to missing data.

**APPENDIX K**

**COURSES USED TO CALCULATE COURSE GPAS**

## Appendix K. Courses Used to Calculate Course GPA

<b>Course Designator</b>	<b>Course Title or Description</b>	<b><i>n</i></b>
Bio 109	Introductory Biology	41
Chem 163	General Chemistry	64
Chem 167	General Chem for Engineering Students	52
Chem177 <sup>†</sup>	General Chem for Chemistry and Biochemistry Students	114
Com S 103 <sup>†</sup>	Computer Applications	84
Engl 104 <sup>†</sup>	First Year Composition I	192
Engl 105 <sup>†</sup>	First Year Composition II	374
Engl 105H	First year Composition Honors	65
Geol 100	The Earth	64
JLMC 101	Mass Media and Society	40
Math 104, 105, 140	Entry-level math courses – students may take only one	62
Math 142	Trigonometry and Analytic Geometry	100
Math 150 <sup>†</sup>	Discrete Mathematics for Business and Social Sciences	113
Math 151	Calculus for Business and Social Sciences	54
Math 165 <sup>†</sup>	Calculus I	107
Math 166	Calculus II	98
Phil 201	Introduction to Philosophy	51
Phys 111	General Physics	31
Phys 221	Introduction to Classic Physics I	76
PolS 215	American Government: Institutions and Policies	62
Psych 101 <sup>†</sup>	Introduction to Psychology	171

<sup>†</sup>Denotes courses used in individual course comparisons.

**APPENDIX L**  
**DESCRIPTIVE STATISTICS BY HALL FOR**  
**ALL OUTCOME VARIABLES**

## Appendix L. Descriptive Statistics by Hall for All Outcome Variables

Outcome Variable	Maple		Larch	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Expected Fall Time Allocation</b>				
Studying Alone	5.21	2.24	4.53	2.15
Studying in Groups*	3.24	1.52	2.78	1.67
Performing Community Service***	2.28	1.56	1.64	1.19
Fulfilling Leadership Roles**	2.31	1.38	1.95	1.27
Attending Classes and Labs	6.03	2.06	6.03	2.01
Engaging in Recreational Activities	4.52	1.92	4.71	2.33
Talking with Instructors Outside Class	1.95	1.08	1.77	1.08
Talking with Advisors	1.66	1.02	1.57	1.03
Working for Pay	3.06	2.61	2.91	2.83
<b>Academic Performance</b>				
Fall 2000 GPA*	2.92	0.71	2.85	0.81
2000-2001 GPA	2.92	0.69	2.89	0.74
Core Courses GPA	2.81	0.77	2.73	0.91
<b>Individual Course Grades</b>				
Chemistry 177*	2.22	1.09	2.71	0.98
Computer Science 103	3.17	0.90	3.23	1.00
English 104*	3.17	0.61	2.91	0.73

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Appendix L. (continued)

<b>Outcome Variable</b>	<b>Maple</b>		<b>Larch</b>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
English 105**	3.14	0.72	2.90	0.84
Math 150	2.68	1.02	2.79	1.02
Math 165	2.31	1.28	2.64	1.23
Psychology 101	2.92	0.83	2.68	0.91
<b>Spring Time Allocation</b>				
Studying Alone***	5.44	2.29	4.18	2.34
Studying in Groups	2.69	1.76	2.32	1.42
Performing Community Service*	2.40	1.84	1.52	1.02
Fulfilling Leadership Roles	2.66	1.97	2.26	1.54
Attending Classes and Labs***	6.95	1.82	6.17	2.33
Engaging in Recreational Activities***	5.54	2.26	4.12	2.32
Talking with Instructors Outside Class	1.72	1.12	1.72	0.96
Talking with Advisors	1.57	1.15	1.42	0.85
Working for Pay	3.64	3.14	3.32	2.96
<b>Satisfaction Scales</b>				
Satisfaction with Facilities***	3.91	0.63	3.27	0.69
Satisfaction with All Staff	4.16	0.72	4.15	0.61
Satisfaction with Traditional Staff	4.05	0.69	4.15	0.61
Satisfaction with Policies	3.39	0.89	3.61	0.68

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Appendix L. (continued)

Outcome Variable	Maple		Larch	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Self-Efficacy Scales</b>				
Self-Efficacy for Courses in Major	7.37	1.36	7.31	1.39
Self-Efficacy for Basic Core Courses*	6.30	1.51	6.13	1.47
Self-Efficacy for Math Courses*	6.18	1.65	5.75	1.71
Self-Efficacy for Science Courses	5.92	1.86	5.74	1.87
Overall Academic Self-Efficacy*	6.27	1.35	6.03	1.42
<b>Attributions for Failure</b>				
Ability	0.29	0.52	0.25	0.47
Effort	1.53	0.72	1.57	0.66
Context	0.19	0.48	0.15	0.44
Luck	0.00	0.00	0.03	0.25
<b>Attributions for Success</b>				
Ability	0.51	0.72	0.49	0.71
Effort	1.28	0.80	1.35	0.78
Context	0.12	0.39	0.08	0.32
Luck	0.09	0.32	0.08	0.32

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## REFERENCES

- American College Testing Program. (1988). *ACT assessment program technical manual*.  
Iowa City, IA: Author.
- Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco:  
Jossey-Bass Publishers.
- Astin, A. W. (1977). *Four critical years*. San Francisco: Jossey-Bass Publishers.
- Bandura, A. (1977). Self-Efficacy: Toward a unifying theory of behavioral change.  
*Psychological Review*, 84, 191-215.
- Betz, N.E. & Hackett, G. (1983). The relationship of mathematics self-efficacy expectations  
to the selection of science-based college majors. *Journal of Vocational Behavior*, 23,  
329-345.
- Blimling, G. S. (1993). The influence of college residence halls on students. In J. C. Smart  
(Ed.), *Higher education: Handbook of theory and research* (vol. 9, pp. 248-307).  
New York: Agathon Press.
- Bouffard-Bouchard, T. (1990). Influence of self-efficacy on performance in a cognitive task.  
*Journal of Social Psychology*, 130, 353-363.
- Cervone, D., & Peake, P. K. (1986). Anchoring, efficacy, and action: The influence of  
judgmental heuristics on self-efficacy judgments and behavior. *Journal of  
Personality and Social Psychology*, 50, 492-501.
- Chapple, J.D. (1984). Freshman housing assignments: A road to student retention. *The  
Journal of College Admissions*, 102, 27-28.

- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*, 55-56.
- DeCoster, D. A. (1968). Effects of homogeneous housing assignments for high ability students. *The Journal of College Personnel, 9*, 75-78.
- Fazio, N. M., & Palm, L. J. (1998). Attributional style, depression, and grade point averages of college students. *Psychological Reports, 83*, 159-162.
- Försterling, F. (1985). Attributional retraining: A review. *Psychological Bulletin, 98*, 495-512.
- Forsyth, D. R. (1986). An attributional analysis of students' reactions to success and failure. In R. S. Feldman (Ed.), *The social psychology of education: Current research and theory* (pp.17-38). New York: Cambridge University Press.
- Koch, D., Wesse, D. & Stickney, R. (1999). New trends in student housing. *Facilities Manager, 15*, 39-42.
- Lane, J., & Lane, A. (2001). Self-efficacy and academic performance. *Social Behavior and Personality, 29* (7), 687-694.
- Lefcourt, H. M., von Baeyer, C. L., Ware, E. E., & Cox, D. J. (1979). The Multidimensional-Multiattributional Causality Scale: The development of a goal specific locus of control scale. *Canadian Journal of Behavioural Science, 11*, 286-304.
- Lent, R. W., Brown, S. D., & Larkin, K.C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology, 31*, 356-362.

- Levine, A. (1994). Guerrilla education in residential life. In C. C. Schroeder, & P. Mable (Eds.), *Realizing the educational potential of residence halls* (pp. 93-106). San Francisco: Jossey-Bass Publishers.
- Lewis, F. M., & Daltroy, L. H. (1990). How causal explanations influence health behavior: Attribution theory. In K. Glanz, F. M. Lewis, & B. K. Rimer (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 92-114). San Francisco, CA: Jossey-Bass Inc., Publishers.
- Madson, D. L., Kuder, J. M., Hartanov, T. F., & McKelfresh, D. A. (1976). Residential academic groupings: A program evaluation. *Journal of College and University Student Housing*, 6 (1), 16-20.
- Magnarella, P. J. (1975). The University of Vermont's living-learning center: A first-year appraisal. *Journal of College Student Personnel*, 16, 300-305.
- McKelfresh, D. A. (1980). The effect of living environments on engineering students. The *Journal of College and University Student Housing*, 10, (2), 16-18.
- Multon, K.D, Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, 38, 30-38.
- Noel, J.G., Forsyth, D. R., & Kelley, K. N. (1987). Improving the performance of failing students by overcoming their self-serving attributional biases. *Basic and Applied Social Psychology*, 8, 151-162.
- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass Publishers.

- Pascarella, E. T., & Terenzini, P. T. (1981). Residence arrangement, student/faculty relationships, and freshman-year educational outcomes. *Journal of College Student Personnel, 22*, 147-156.
- Pascarella, E. T., & Terenzini, P. T. (1980). Student-faculty and student-peer relationships as mediators of the structural effects of undergraduate residence arrangement. *Journal of Educational Research, 73*, 344-353.
- Pascarella, E. T., Terenzini, P. T., & Blimling, G. S. (1994). The impact of residential life on students. In C. C. Schroeder, & P. Mable (Eds.), *Realizing the educational potential of residence halls* (pp. 22-52). San Francisco: Jossey-Bass Publishers.
- Powers, S., Cool, B. A., Gose, K. F., & Douglas, P. (1985). A reliability and validity investigation of the multidimensional-multiattributonal causality scale. *Educational and Psychological Measurement, 45*, 897-901.
- Schroeder, C. C. (1994). Developing learning communities. In C. C. Schroeder, & P. Mable (Eds.), *Realizing the educational potential of residence halls* (pp. 165-189). San Francisco: Jossey-Bass Publishers.
- Schroeder, C. C., & Griffin, C. M. (1976). A novel living-learning environment for freshman engineering students. *Engineering Education, 67*, 159-161.
- Taylor, R. G., and Hanson, G. R. (1971). Environmental impact on achievement and study habits. *Journal of College Student Personnel, 12*, 445-454.
- Terenzini, P.T., Pascarella, E. T., & Blimling, G. S. (1996). Students' out-of-class experiences and their influence on learning and cognitive development: A literature review. *Journal of College Student Development, 37*, 149-162.

- Terenzini, P.T., Springer, L., Pascarella, E. T., & Nora, A. (1995). Academic and out-of-class influences on students' intellectual orientations. *The Review of Higher Education, 19*, 23-44.
- Van Overwalle, F., & De Metsenaere, M. (1990). The effects of attribution-based intervention and study strategy training on academic achievement in college freshmen. *British Journal of Educational Psychology, 60*, 299-311.
- Williams, D. E., & Reilley, R. R. (1974). The impact of residence halls on students: The research. In D. A. DeCoster & P. Mable (Eds.), *Student development and education in college residence halls* (pp. 211-233). Washington, D. C.: American College Personnel Association.
- Wilson, T. D., & Linville, P. W. (1982). Improving the performance of college freshmen: Attribution therapy revisited. *Journal of Personality and Social Psychology, 42*, 367-376.
- Wilson, T. D., & Linville, P. W. (1985). Improving the performance of college freshmen with attributional techniques. *Journal of Personality and Social Psychology, 49*, 287-293.
- Wood, R. E., & Locke, E. A. (1987). The relation of self-efficacy and grade goals to academic performance. *Educational & Psychological Measurement, 47*, 1013-1024.