

Assessment of Living-Learning Communities and Regular Residence Life Programming

Missouri State University 2007-2008

Summary Report

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Purpose

To utilize existing data collected by Denise Baumann on students participating in the Living-Learning Communities (LLC) and regular residence life programming to assess preliminary outcomes and effectiveness of the LLC program's first year and make recommendations for subsequent program evaluation.

Methods

There were 134 participants in the LLC and 128 participants in the control group of regular residence life programming. Participants from a small quasi-Living-Learning Community group (N = 56) established after the fact were excluded from the analyses on conceptual and statistical grounds. The original measure used to assess the effectiveness of the LLC is the Iowa State University Undergraduate Education Survey (<http://www.lc.iastate.edu/02-03survey.pdf>). It is comprised of 26 items assessed on a 9-point Likert scale. The psychometric properties of the scale have not been previously investigated. This survey was not designed to be a comprehensive evaluation of the goals of the LLC and residence life program, but instead to sample areas of ten goals identified for the LLC. This measure was administered twice: at the beginning and at the end of the program's first year, therefore we have a pre-test/post-test assessment on this measure. At post-test, 58 quantitative items (which included repeats of the initial 26), were administered. Sample items are presented in the Results section and the entire survey is given in Appendix A. Qualitative items (e.g., What are you most looking forward to this semester? What most worries you about your first year?) were not included in the present analyses. Analyses in this report include comparisons of means on each of the 26 items at pre and post intervals, as well as group comparisons on the items included only at post-test. In addition, mixed factorial design analyses with type of group as the between groups variable and time of assessment as the within group variable were conducted. Finally, descriptive exploratory factor analyses were conducted on the 26 items of the Iowa State University Undergraduate Survey, revealing 4 factors and some significant differences between groups on these factors.

Results: Means and Arithmetical Differences

Appendix B lists means and arithmetic differences in those means of the 26 items at pre-test and post-test for the LLC and control groups organized according to ten identified goals. In general, most items showed means a little above the mid-point on the 9-point scale (scores of 6-7) at both administrations for both groups. In other words, absolute differences across time and group were small.

While only sometimes statistically significant (see below), the difference between pre-test and post-test was larger for the LLC floors than the control floors on 25 of the 26 items.

Results: Statistically Significant Differences on Individual Items

At pre-test, significant differences in means were noted between the LLC and control groups on 18 of the 26 items. The means for the control group were always higher than the means for the experimental group. The significant differences were on items 1, 2, 5, 6, 8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26. In other words, the control group and the LLC group were not equivalent at the start of the program. The control group showed more of the preferred characteristics from the beginning. Selection biases and recruitment practices might explain these unexpected results.

At post-test, significant differences were observed on only 11 of the 26 items. Differences were observed on items 1, 3, 15, 18, 21, 30, 31, 44, 46, 47, and 53. The means for the control group tended to be significantly higher than the means for the experimental groups with one exception (item 53). The groups were more similar in regard to the preferred characteristics at the end of the year.

If we look more closely at the results of the control group and experimental group and how their perceptions changed over the course of the year, we are able to determine that perceptions increased from the beginning to the end of the year. More importantly, in some cases it seemed that the LLC group increased more over time on the preferred characteristics than the control group. In other words, if we expect the LLC group to change significantly more from the beginning to the end of the semester, we would expect to notice a significant interaction effect for the different questions examined. The interaction effect was significant ($p < .05$) for the following questions: 1, 5, 16, 17, and 19. In addition, the interaction was found to be marginally significant ($p < .10$) for the question 7. Here are these questions:

- (#1) Knowledge of University policies and procedures relevant to undergraduate students
- (#5) Knowledge of the University's public affairs mission
- (#16) Ability to coordinate multiple tasks at the same time
- (#17) Ability to study effectively for the college setting
- (#19) Ability to facilitate group interactions
- (#7) Ability to analyze and evaluate ideas from all viewpoints

So for about 1/4 of the questions there was change in the LLC group that was significantly different than the change observed in the control group, suggesting that the LLC group improved to a greater extent than the control group. However, in 16 instances, the control group also improved over the course of the year, suggesting that residence life and freshmen experiences shared by all students likely increase the desired characteristics.

Results: Descriptive Exploratory Factor Analyses

The data on the 26 items repeated in both administrations with both groups was factor analyzed and obliquely rotated due to high inter-correlations of the factors. Preliminary analyses attempted to reproduce the 10 goals structure initially used to develop the Survey of Living-Learning Program Model.

Factor analyses did not converge in a stable 10 factor structure. After several preliminary analyses, a four factor model, which explained 54.5% of the variance and was conceptually sound, was decided upon. This structure is exploratory and would need to be reproduced with future data collection. Items 17 and 21 were removed from the analyses due to their lack of loading or cross-loading on the other factors. Tentative conceptual anchors for the four factors, their respective items (in descending order of loading values), and the factors' internal consistencies (reliability) were:

Factor 1: Ethical Leadership and Cognitive Competence. Items 11, 10, 13, 8, 9, 19, 12, 7, 18, 24, 23 (alpha reliability = .91)

Factor 2: University Knowledge. Items 2, 5, 1, 6, 3, 4 (alpha reliability = .84)

Factor 3: Time and Task Management. Items 15, 14, 16 (alpha reliability = .84)

Factor 4: Health-Oriented Self-Regulation. Items 26, 25, 20 (alpha reliability = .81)

These factors have adequate to good reliability and are relevant for both the specific goals of residence life and the University's overall public affairs mission. The range of inter-item correlations was adequate. For factor 1 (.54 to .76), for factor 2 (.53 to .73), for factor 3 (.67 to .76), for factor 4 (.53 to .73).

Results: Statistically Significant Differences on Factors

Comparisons of the mean improvement from the beginning to the end of the program showed a significant difference ($p < .05$) for Factor 3: Time and Task Management. That is, students in the LLC group showed significantly more improvement on the Time and Task management construct than students in the control group. Figure 1 below depicts this effect. No other significant effects were found, although the effect was in the expected direction for the Ethical and Cognitive Competence and Leadership construct (see Figure 2 below).

FIGURE 1. Estimated means over time for the LLC and Control groups for the time and task management construct

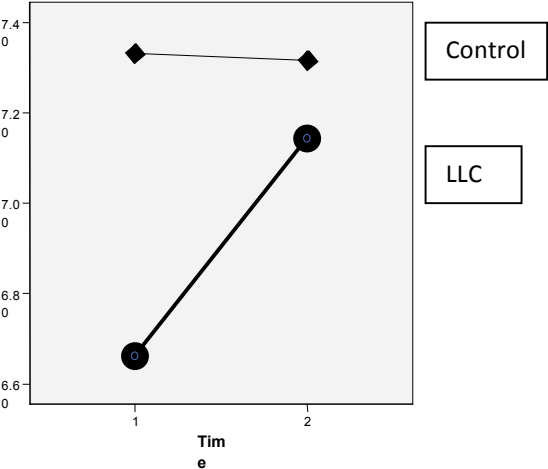
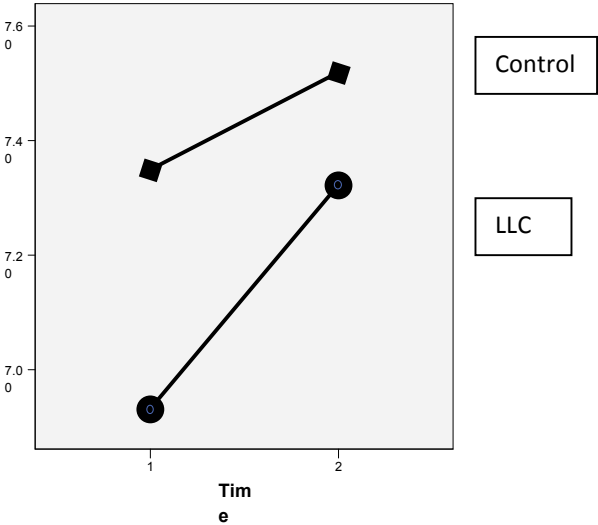


FIGURE 2. Estimated means over time for the LLC and Control groups for the Ethical and Cognitive Competence and Leadership construct



Recommendations and Future Directions

This summer, we worked with Denise Baumann and Veronica Sanders on an improvement of the LLC assessments used in 2007-2008. For the 2008-2009 assessment period special attention has been paid to the recruitment of the students on the LLC and control floors so that the students are more likely to be comparable at the beginning of the program. Also, additional survey items have been developed to better capture the different dimensions assessed by the Survey of Living-Learning program Model. In conjunction with this revised assessment, motivational measures have also been administered to examine the impact of the LLC on the development of self-determined motivation in students. Differences in motivation between the LLC and the control groups will be assessed and a significant difference in growth will be expected showing the impact of the LLC. This second wave of assessment is currently underway and will transpire until the end of spring 2009. In 2009-2010, the assessment of the Living-Learning Communities could utilize further analyses from the 2008-2009 data and more explicitly focus on the extent to which LLC fosters the three dimensions of public affairs at Missouri State University: Community Engagement, Cultural Competence, and Ethical Leadership. Further improvements to existing scales or the addition of another scale (e.g. Public Affairs Scale) could contribute to effective assessment and resultant effective planning. Absolute levels of final means indicate that students frequently have a fair degree of the preferred characteristics, but with some room to improve in both groups.