



## Assessment Techniques and Results

**William E. Knight**

Director of Planning and Institutional Research  
Adj. Ast. Prof., Higher Education and Student Affairs  
Bowling Green State University  
Learning Community Open House:  
Residential Learning Communities in Action  
October 17, 2003



## Background

- This presentation will include a summary of a comprehensive study of learning communities and first year programs done at BGSU in 2001-2002.



## Background

- The study was prompted by a request from BGSU's president to provide feedback about the effectiveness of the learning communities and first year programs that currently exist at BGSU. It was requested that the study should act as a formative, point-in-time means of feedback to the program staff and the university community, rather than a high stakes summative evaluation from which resource allocation decisions would result.



## Background

- For this study, research questions were developed after a review of the literature on learning communities and first year programs generally and the available background information about the programs at BGSU.



## Research Questions

What are the demographic and educational characteristics of participants in learning communities and first year programs?

What are the retention and graduation rates, mean cumulative grade point averages, and mean student credit hours earned for program participants and how do these outcomes compare to those for non-participants?

## Research Questions

What significant differences exist in retention rates, mean cumulative grade point averages, and mean student credit hours earned for participants versus non-participants after gender, race, and high school grade point average are controlled for?

What significant interaction effects exist between program participation and gender, race, and high school grade point average as shown in retention rates, grade point averages, and student credit hours earned?



## Research Questions

What significant differences exist in the results of the BGSU New Student Transition Questionnaire for participants versus non-participants after gender, race, and high school grade point average are controlled for?

What significant differences exist in the results of the National Survey of Student Engagement for participants versus non-participants after gender, race, and high school grade point average are controlled for?



## Research Questions

What are the results of income vs. expense analyses for the learning communities and first year programs?

What are the results of locally administered assessments of learning communities and first year programs?



## Results: Descriptive Analyses

- Summary profiles of the age, gender, ethnicity, college during the first semester, residency, ACT composite score, and high school grade point average of learning community and first year programs participants (as well as for students who didn't participate in any of the programs) for Fall 1997 through Fall 2001 were developed.

- Tracking of the enrollments and average retention rates, graduation rates, cumulative grade point averages and cumulative credit hours earned each subsequent spring and fall semester for learning community and first year program participants was carried out. The basic finding is that the retention rates are higher on average for participants in most of the programs than for students who did not participate in any of them.

## Results: Regression Analyses

- It is important to take into account differences in participant characteristics such as gender, race, and pre-college academic achievement that may affect the outcomes studied. Regression analyses were carried out for the same outcomes as noted earlier but with gender, race, and high school grade point average controlled for.

## Results: Regression Analyses

- Chapman and Honors showed significant positive effects on retention after controlling for background variables. Chapman students graduated within four years at a significantly higher rate as well.
- Chapman and Honors showed significant positive effects on grade point averages after control for background variables.
- Chapman and Honors showed significant positive effects on student credit hours earned after control for background variables.



## Results: Regression Analyses

- It is important to remember that there may be underlying motivational factors that lead to self-selection of students into these programs that could not be taken into account by the study. Also, the number of participants in the programs may have affected the results; this may have been the case with the Health Sciences Residential Community.



## Results: Conditional Effects

- The question of which programs work best for which kinds of students was addressed by examining the effect of interaction terms on retention, graduation, grade point averages, and credit hours earned were examined after other background variables were controlled for.

## Results: Conditional Effects

- Females may particularly benefit from participation in Chapman and Honors.
- Students of color may be more likely to benefit from participation in Chapman and Honors.
- Students with higher high school grade point averages appear to be more likely to benefit from participation in Honors.



## Results: NSTQ

- Significant differences in scale scores formed from the results of the BGSU New Student Transition Questionnaire were investigated for learning community and first year program participants.

- A few significant differences were noted, particularly for HSRC and Honors, but the results were not very informative since the effect sizes for program participation were very small and the percentage of variance accounted for in the scales due to program participation was very low.
- Sharing of item-by-item comparative results among program directors is probably a more effective means of feedback for the survey results.



## Results: NSSE

- Significant differences in scale scores formed from the results of the National Survey of Student Engagement were investigated for learning community and first year program participants.



## Results: NSSE

- A few significant differences were noted, particularly for Chapman and Honors, but the results were not very informative since the effect sizes for program participation were very small and the percentage of variance accounted for in the scales due to program participation was very low.
- Sharing of item-by-item comparative results among program directors is probably a more effective means of feedback for the survey results.



## Results: Income vs. Expense

- Income vs. expense analyses were carried out for programs for which the previous analyses were most supportive of the linkage between program participation and retention. Income gained from improved retention and also by improved recruitment was compared to program expenses for 2000-2001.

## Results: Income vs. Expense

- The income to expense ratios were all favorable. The ratio was 1.3 to 1 for Chapman if only income gained from improved retention is considered and 2.3 to 1 if income gained from improved recruitment is also considered. The HSRC ratio is 2.3 to 1 (retention only) or 4.6 to 1 (retention and recruitment). The ratio for Honors is 2.4 to 1 (retention only) or 4.3 to 1 (retention and recruitment).



## Results: Local Level Feedback

- Chapman and Honors administer satisfaction/feedback surveys to their participants each semester and/or each year. The results have been used to modify activities and the feedback is favorable. Chapman and Honors also utilize student evaluations of instruction for their associated individual courses.

- Chapman also administered a follow-up survey to a sample of its original Fall 1997 cohort in the spring of 2001. Chapman plans to carry out focus groups with a random sample of its participants each year in order to add further depth to its assessment efforts.



## Limitations

- It was made clear that several assumptions were made as the procedures were carried out and other results may have been reached if different approaches were followed. The outcomes highlighted in this study are not necessarily the only ones being achieved by the programs.

- There may well be underlying motivational factors that lead to self-selection of students into these programs that could not be taken into account by the study. The number of participants in the programs may have affected the results; this may have been the case with the Health Sciences Residential Community.



## Distribution of Results

- The results were first shared with institutional leaders as well as internal assessment experts both for providing a preview prior to widespread distribution as well as gaining feedback about the appropriateness of methods. The results were then shared with the directors of the learning communities in order to provide them with a preview as well as to allow them to check on any possible errors of fact in the study. Finally, the report was made available to the general University community.

- More effective programs seem to be showing a pattern of
  - having more well articulated outcomes for student learning and development
  - engaging students for a substantial degree of time
  - having a greater degree of staff time and attention devoted to them
  - mixing students with diverse backgrounds
  - bringing together faculty and students outside of the classroom
  - having a history of carrying out local-level assessments

- <http://www.bgsu.edu/offices/ir/studies/LearningComm/contents.html> (BGSU IR study)
- Knight, W. E. (2003). Learning communities and first year programs: Lessons for planners. *Planning for Higher Education*, 31(4), 5-12. (article)



# Discussion

