

New Directions for Learning Community Assessment and Research

By Juan Carlos Huerta

Abstract

At the 12th Annual National Learning Communities Conference in November 2007, Juan Carlos Huerta, Gale Stuart, Lauren Chism, and Michele Hansen participated in a panel discussion about new directions in learning communities assessment and research. The intent of the panel discussion was to hear from those involved in learning community assessment, research, and administration about what they believe future research and assessment needs to address. What follows is a summary of each panelist's presentation.

Quantifying Qualitative Direct Measures of Student Learning

Panelist: Juan Carlos Huerta, Ph.D., Co-Director University Core Curriculum Programs and Associate Professor of Political Science, Texas A&M University-Corpus Christi.

My suggestion for new directions in assessment and research of learning communities is to add quantitative measures of qualitative direct measures of student learning to student surveys. This can be accomplished by creating assignments or activities that allow students to demonstrate their progress in achieving LC learning outcomes (qualitative measures). A grading rubric can then be used to quantify the qualitative direct measures of student learning. The quantified results can then be merged with data from student surveys and student data. The merged data will allow for an examination of the impact of classroom experiences and pre-college traits on direct measures of student learning.

At Texas A&M University-Corpus Christi (A&M-Corpus Christi) we are attempting to implement this system. What happens first is that we ask our learning community (LC) teams to develop an assignment of activity that measures one of the LC program student learning goals. All full-time first-year students participate in the LC program in the fall and spring semesters, and the two program goals that each LC team are expected to meet are:

- *Establish broad and multiple perspectives*
- *Make connections between scholarly disciplines*

After each team develops the assignment or activity, the teams are asked to define the criteria for success. For example, what do the students need to do to demonstrate that they can make connections between scholarly disciplines? Perhaps that means they earn a grade of a B or better on a connections assignment. Hence, students that made a grade of B or better would receive a value of one while students who made less than a B would be coded as zero. If there is appropriate matching information (student identification numbers) for both the direct measures and the survey data, the student learning data can be merged with the survey data. The merging yields a quantified direct qualitative measure of student learning with student survey data and allows for multivariate analyses of predictors such as student learning, persistence, and achievement.

Similarly, this process could also occur as part of a larger assignment. Suppose the students have a written assignment with several components. One component of the assignment may address establishing broad and multiple perspectives. Assume the assignment is worth one hundred points. Using a rubric, the team develops the criteria for evaluating the work and can specify how many points broad and multiple perspectives are worth. For example, the team may decide it is worth twenty points and that a student who clearly demonstrates they understand broad and multiple perspectives receives the full twenty points while a student who shows a good grasp, but misses some key ideas, receives fifteen, and so on. The LC team can determine that successfully meeting this program outcome means that only students who receive all twenty points qualify. Thus, all those students would receive a value of one, while those earning less than twenty points would receive a value of zero. This data can also be merged at the individual level to a student survey or data set for analysis.

This is a work in progress at A&M-Corpus Christi and we have not yet been able to fully implement it. It is something we wish to strive for so we can have a better grasp of the predictors of student learning and have better measures of student learning. Once we are able to implement a system to consistently gather information across the communities we can then move toward developing more refined measures. The challenge is to consistently collect the data from all the learning communities in a reportable format. Furthermore, I hope this is something we who assess and research learning communities can do at other campuses so we can better demonstrate the value of learning communities.

Social Network Analysis as a Tool for Assessment

Panelist: Gale Stuart, Assistant Director for Assessment, Texas A&M University-Corpus Christi.

A social network is a system of relationships among individuals. A social network can be described in terms of a diagram or graph that indicates these relationships between individuals and the ways in which they are connected (Scott 2005). Social networks operate on many levels, from friendship groups up to entire nations.

Social network analysis is a broad term that encompasses the set of methods used to explore relational data (Scott 2005). Its roots are in the sociograms used by mid-twentieth century sociologists to describe small groups as well as in the mathematical approach of graph theory. Relational data is defined as a measure of whether a relationship exists between two actors; that relationship also may have a value (strong or weak) (Scott 2005). Most traditional social science analytical methods focus on the individual characteristics of actors, while relational data is focused on the social context of actors. For example, traditional analytical methods consider attributes like height, weight, sex, IQ, voting preference, mathematics test score, or alcohol consumption during the past week. An example of what social network analysis considers, in contrast, would be how many friends a person has in their homeroom class. When everyone in the homeroom provides their list of friends, a network can be drawn of all the relationships between all the people in the class. A traditional data set is based upon the case-by-variable basis where every row is a case and every column is a variable. In comparison, social network data are housed in incidence and adjacency matrices and vectors on a case-by-affiliation basis. In this way, the associations between individuals are maintained and can be measured.

The importance of peer relationships to college outcomes has been well documented (Astin 1993; Astin and Panos 1969; Newcomb and Wilson 1966; Feldman and Newcomb 1970; Spady 1970, 1971; Bean 1980, 1983; Tinto 1993; Pascarella and Terenzini 1991, 2005), and theories underlying the learning community reform are based upon the notion that, at least in part, the environment of a learning community will help students to form bonds in their classes. Social network analysis can aid in quantifying such relationships and once the relationships are measured, their effect on college outcomes can be tested.

A series of social network studies were performed at a public regional university in Texas that looked at the social networks of first-time-in-college freshmen enrolled in learning communities. It was found that certain aspects of the relationships between students in their freshman seminar class do predict academic success. Specifically, the study found that students who are socially isolated from others do not perform as well academically as their better connected peers. Students who are members of a friendship group that is closed to outsiders tend to have lower GPAs than students who have friends with more different people. It was found that studying in groups is good for academic performance but that it is important to mix-up the memberships of those groups. Studying in exclusive pairs created lower than expected academic performance.

These data indicated that at this campus, active and collaborative learning strategies that promote friendship and study partner creation are good for student performance. Although it is important for students to form solid relationships in class for friendship and for studying, students need to change it up on occasion so they have access to more new information from others in their class. These studies also demonstrated the importance of identifying socially isolated students so that some sort of intervention can be applied to bring them into closer social contact with the group.

Comprehensive Learning Community Assessment

Panelist: Michele J. Hansen, Ph.D., Director of Assessment, University College, Indiana University-Purdue University Indianapolis (IUPUI).

Comprehensive assessment activities are often necessary to plan, implement, and continuously improve learning communities. The following are some major strands of learning community assessment issues that need to be addressed in current and future research improving and proving effectiveness: using assessment results for planning and resource decisions; faculty involvement; assessment feedback; the assessment of direct student learning outcomes; using quantitative and qualitative approaches; and mechanisms for linking data to action.

The assessment and evaluation of learning communities (LCs) must take into account that the term “learning communities” encompasses a wide variety of components, and each type of LC intervention is a complex synergy of experiences. As a result, LC assessment plans need to be comprehensive, multi-faceted, and include multiple frameworks. However, the plans must be “doable” given constraints on faculty members’ resources and time. Thus, assessment scholars and faculty members must work collaboratively to investigate the effectiveness of interventions and how activities positively influence student learning. The net result of LC assessment should be meaningful data that can be used to inform teaching.

Based on a series of qualitative and quantitative investigations about learning communities conducted over a period of four years at IUPUI, we have found that learning communities seem to provide opportunities for student connections, students establish friendships by participating, more investigation is necessary to determine if students are able to integrate learning between courses and disciplines, it is important to create structures and procedures that allow faculty to collaborate and engage in interdisciplinary pedagogies, and early findings suggest positive impacts on academic success and retention.

Although much work has been conducted in the area of LC assessment, much work remains, and there are numerous challenges that need to be addressed. For example, there are relatively few studies conducted that effectively examine what aspects of learning communities produce desired outcomes. In other words, learning communities are complex experiences with multiple components (e.g., service learning, positive peer interactions, faculty-student interactions, diversity appreciation), and one challenge to assessment involves identifying exactly what discrete aspects of the experience are leading to particular learning outcomes. Another area of future research needs to focus on structures, policies, and procedures that can be implemented to facilitate faculty interaction and collaboration. A third area of investigation should be related to how to effectively integrate themes and still cover discipline course content. Finally, much of the research in LC assessment has been focused on measurement of indirect learning outcomes by use of self-reported instruments such as surveys. More research employing direct measures of student learning is needed.

Assessing Learning Community Components and Their Impact on Positive Outcomes for Students

Panelist: Lauren Chism, Director of Themed Learning Communities, Indiana University-Purdue University Indianapolis (IUPUI).

Learning communities assessment often focuses primarily on grade point average and student retention. While these outcomes are important to both students and institutions of higher education, it is increasingly difficult to get a clear picture of the relationship between grade point average, retention and participation in learning communities. There are a host of factors related to grade point average and retention, internal and external to learning communities programs. Students enrolling in learning communities have an increasingly wide range of background characteristics related to their academic performance. Furthermore, learning communities vary extensively within and between colleges and universities. Many learning community students are also participating in multiple programs and interventions designed to increase academic performance. As learning communities research advances, attention to these diverse variables will receive increasing consideration.

In order to facilitate continual program improvement, learning communities research must begin to examine which components of the program are contributing to positive outcomes for students. This complex task requires both an in-depth knowledge of assessment methods and a thorough understanding of the details of the specific learning community program. In effect, this type of inquiry involves a collaborative partnership between institutional researchers and learning community faculty, coordinators and directors.

At IUPUI, specialists in institutional research have routinely collaborated with learning community faculty and staff in creating comprehensive assessment plans, survey instruments, focus group protocols and more. Recently, the collaborations have led to the inclusion of new questions and variables designed to examine various components within learning communities. For example, a considerable proportion of Themed Learning Communities are incorporating service-learning into the curricula. In order to begin examining the influence of this initiative, a variable for service-learning has now been added to several years of datasets. A multivariate analysis is employed to investigate the impact of service within the learning communities program, while continuing to control for covariates and significant background characteristics. Additionally, the Themed Learning Community Student Feedback Questionnaire has been revised to specifically address service-learning. While this analysis is in the beginning stages, the information gathered is already used to guide future programming. Representatives from the Center for Service and Learning are providing annual workshops for Themed Learning Community faculty to facilitate greater participation.

In the aforementioned example, it is important to note that this research was prompted by the inquiries of learning community faculty and administrators. Specialists in

institutional research designed methods of inquiry to begin the process of acquiring data and conducted analyses. As results surfaced, the information was used to make programmatic improvements. In essence, investigation, collaboration and transformation are key components to advancing learning community research and learning communities programs in general.

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