Using Social Network Data to Examine Community-Campus Partnerships: Preliminary Insights from the 2012-13 Service Learning Inventory

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**DESCRIPTION**

Researchers studying the institutionalization of service learning in higher education note the difficulty campuses experience in trying to monitor and evaluate engagement practices and outcomes. This poster highlights ongoing work by the IUPUI Center for Service and Learning to document and assess campus-wide curricular-based community university partnerships using methods and theory grounded in the study of social networks. To pilot this approach, we used data collected through the 2012-13 Service Learning Course Inventory to illustrate the potentials and pitfalls of using pre-existing data.

**Capturing the Whole Network?**

During 2012-13, instructors offered 316 course sections that included a service learning component (Table 1). Instructors reporting 128 course sections also contributed to the complete collection of data on service hours. Collectively, instructors had 100% of service contributions and 43% contributed student enrollment hours to their course. Of instructors, 28% contributed directly to the 2012-13 Inventory.

At the institutional level, instructor-sited partner nominations appear very dense and a striking representation of the level of course-based partnership activity at IUPUI. Whole network views can be particularly useful in visualizing aggregated or directed relationships as a means to understanding network structure and dynamics at both the individual- and institutional-levels. In this context, this work focuses on the centrality of core nodes and the networks that have relationships with the same partner. Under certain conditions, a similar pattern may characterize community organizations, particularly those where an organization hosts a large number of IUPUI students. Awareness of institutional affiliation may ring school or disciplinary affiliation; alternatively, the students may just be thought of as volunteers or interns (hereafter hand). Lack of awareness of the various parties involved can weaken the interpretation of service learning outcomes for students and communities. Similarly, it may also be more meaningful to consider knowledge production efforts directed to address community issues.

Whole network graphs, while valuable, can be difficult to interpret at large scale organizational units (due to the sheer number and density of vertices). As dense as this data visualization appears (Figure 1), however, it still underestimates the total number of collaborations occurring at IUPUI in a specific context and scale. For example, in 2012-13, the instructor-response rate was 48%.

**Table 1. Distribution of Service Learning Courses by Curriculum Level, Type of Work, and Contributed Service Hours**

<table>
<thead>
<tr>
<th>Curriculum Level</th>
<th>Count</th>
<th>Total Enrollment</th>
<th>Contributed Service Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Level</td>
<td>81</td>
<td>2,371</td>
<td>21,205</td>
</tr>
<tr>
<td>200 Level</td>
<td>96</td>
<td>2,755</td>
<td>20,218</td>
</tr>
<tr>
<td>300 Level</td>
<td>122</td>
<td>1,401</td>
<td>34,362</td>
</tr>
<tr>
<td>400 Level</td>
<td>122</td>
<td>1,148</td>
<td>31,385</td>
</tr>
<tr>
<td>Graduate School</td>
<td>73</td>
<td>1,561</td>
<td>31,208</td>
</tr>
<tr>
<td>Total</td>
<td>588</td>
<td>8,691</td>
<td>277,047</td>
</tr>
</tbody>
</table>

The descriptive power of SLN is being used to appropriately and tellingly represent flows of information, people and resources among individuals in specific contexts and at a particular scale. To illustrate, we rendered networks for all courses in which an IPS or supplementary school site was engaged in the school year 2012-13. Figure 2 shows the resulting network of relationships.

IUPUI has a rich tradition of service learning across the curriculum; however, like many engaged campuses, comprehensive monitoring of the evolution, structure and outcomes of community-academic partnerships has been challenging. The literature on community-academic partnerships [refer handout] illustrates that these collaborations are not only important, but necessary in those academic and research settings that are engaged in community partnerships. Much of this work focuses on these partnerships at a micro level to understand how they develop and function over time and how they are represented in research. Community-university partnerships can be represented in a number of ways including through the use of social network data. Social network data are non-valued and directed. This deflates our results.

**WHAT IS THE SERVICE LEARNING COURSE INVENTORY?**

The Service Learning Course Inventory is a campus-wide census of curricular, community-based and community-university partnerships. The Center for Service and Learning annually administrates the Inventory to IUPUI instructors on behalf of the Chancellor. It collects information about the institutional-level design of academic courses and community partnerships at the graduate, professional and undergraduate levels.

The Inventory draws both on institutional data housed in the Registrar’s Office and in academic units, as well as additional information supplied by instructors and department (Figure 3). In addition, information on instructors whose courses are not designated through the Registrar’s Office as including a community-university component is collected. As a result, the information collected and aggregated through the Inventory is not available through any other database at IUPUI making it a unique dataset to examine a range of practices.

**What is the Social Network Data of IUPUI?**

The Inventory makes use of the Social Network Data of IUPUI (www.sned.iupui.edu) which is accessed through the NetDraw software (2012). The Inventory draws both on institutional data housed in the Registrar’s Office and in academic units, as well as additional information supplied by instructors and department (Figure 3). In addition, information on instructors whose courses are not designated through the Registrar’s Office as including a community-university component is collected. As a result, the information collected and aggregated through the Inventory is not available through any other database at IUPUI making it a unique dataset to examine a range of practices.

**Methods and Limitations**

**Presentation**
- Presented using NetDraw and UCINET Version 6.4.6.0.0 and NetDraw 6.4.6.0.0.
- The data presented here reflect only the nominations offered by instructors.
- The data presented here reflect only the nominations offered by instructors.

Based on current reporting, for the current academic year, we have added questions related to this topic to the 2016-17 Inventory.

**UNIQUENESS OF GEORGE WASHINGTON COMMUNITY HIGH SCHOOL**

George Washington Community High School (GWCHS) is the only IUPUI partner institution in which multiple programs/department/schools site are represented. In all other reported cases, individual faculty/profiles reported collaborating with one to two IPS partners. Most also reported other partners outside of IPS (not shown here).

The multidisciplinary clustering at George Washington is noteworthy. IUPUI has built a significant infrastructure over the last fifteen years centered on engaging academic units as part of a greater university-assisted school model designed to make GWCHS an anchor institution for the neighborhoods served by the school. However, the relatively higher levels of reporting by individual instructors that self-report with GWCHS, while still limited, may reflect a greater level of awareness and buy-in among these individuals to participate in the inventory over other school-based collaboration across campus. Further inquiry is needed.

**Service Learning at IPS**

INSPIRE has a long-term commitment to supporting student success along the P-20 pipeline. Campus collaborations with IPS and other township schools are often cited as an important focal point of these efforts (see handout). These efforts transcend these projects nested inside the curriculum and include curriculum, extra-curricular and research collaborations.

The data presented here reflect only the nominations offered by instructors through the Service Learning Inventory.

**ILLUSTRATIVE PATTERNS**

**SERVICE LEARNING FOOTPRINTS**

Comparing results between Figures 3 and 4 helps to capture the range of “foot prints” that service learning courses have on a particular campus. In this case, we look at the distribution of course work that integrates service learning. The black boxes represent the data for all courses across IPS. This in turn may reflect different tendencies among departments in the design of 200/300 level courses that integrate service learning (e.g., larger numbers of students and service hours as if all enrolled students in course 3 contributed 65% of those service hours to the nominated IPS partner. In many cases, this assumption may be true. More research is needed to better understand the potential, goals and assumptions behind the partnerships that instructors set up with the partner. We have added this address in our data collection methods; for 2013-14 by including specific questions related to this topic.

For 2012-13, Figure 4 reflects our effort to address this limitation. We recallculated flows of people and time. Use this area to explore the set of the core and contributed students divided by the number of instructors in part. Similarly, nodal size is the result of dividing total number of enrollees by the number of enrolled partners.

**SCOPE OF IPS COLLABORATIONS AND INSTRUCTOR WORKLOAD**

In many cases, course-based collaborations with IPS appear department/school based (Figure 3). One could make the case that against IPS individual instructors are heavily involved in brokering and maintaining their own relationships with IPS partners; however, no institutional data has been collected to clarify the varying challenges that are faced by faculty as they engage in developing and maintaining partnerships in service learning. Extensive research has been conducted (e.g. National Nanotechnology Institutes) in understanding the institution of partnerships regardless of the number of instructors and individual partnerships (handout).

Based on current reporting, lecturers/clinical and adjunct faculty carry the majority of the real work load for teaching service learning courses, both across IPS collaborations as well as in this site (Figure 3). This pattern continues in the site data, with no other research sites where tenure-track/tenured faculty involvement predominates. Instead, a more casual model of manual work is possible with the delivery of service learning courses. We have added questions related to this topic to the 2016-17 Inventory.

**EXEMPLARY PARTNERSHIP**

One potential source for supporting institutional initiatives is the local community. IUPUI making it a unique dataset to examine a range of practices.

To illustrate, we rendered networks for all courses in which an IPS or supplementary school site was engaged in the school year 2012-13. Figure 2 shows the resulting network of relationships.

**What is the Social Learning Course Inventory?**

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The Inventory draws both on institutional data housed in the Registrar’s Office and in Academic Affairs, as well as additional information supplied by instructors and department (Figure 3). In addition, information on instructors whose courses are not designated through the Registrar’s Office as including a community-based or community-university component is collected. As a result, the information collected and aggregated through the Inventory is not available through any other database at IUPUI making it a unique dataset to examine a range of practices.

**References**

1. Presented using NetDraw and UCINET Version 6.4.6.0.0.
2. The data presented here reflect only the nominations offered by instructors.
3. Results must be treated as preliminary instructor responses vary within and across IPS schools (e.g., 54%).
4. Instructor responses vary in their degree of completeness and specificity in both partner nominations as well as the reporting of service hours. This deflates our results.
5. The information presented here reflect only the nominations offered by IUPUI instructors.
6. The Inventory data includes networks generated by more than one instructor who has served as a consultant to a project.
7. The Inventory data includes networks generated by more than one instructor who has served as a consultant to a project.
8. Methods and Limitations
9. Additional methods and limitations are explored by the literature in the area of community-academic partnerships.