Title

Using Cooperative Education Evaluation Data for University and Program Learning Assessment

Abstract

In the United States, there is continued interest in assessing student learning for curriculum, program, college, and institutional improvement, as well as to comply with accreditation standards (regional and professional). In line with Drexel University's mission, evaluation of a student's proficiencies in both transferrable skills (communication, leadership, etc.) and discipline-specific competencies is critical. The Steinbright Career Development Center offers a robust solution to providing our University colleagues with one source of direct assessment through the undergraduate cooperative education program which collects student performance feedback from employers at the conclusion of six-month work terms. After revising student and employer co-op evaluation and data distribution practices to better support University-wide and programmatic student learning assessment, the assessment focus has shifted to departmental collaborations, data-driven curriculum changes, and continuous quality improvement. With three years of enhanced assessment data, Drexel University is providing significant data to college deans and faculty chairs on the performance of their students in real-world work environments. This data is currently being used to support curriculum review and change by University faculty as well as to support other projects across the institution, which will be the focus of this session.

Introduction

The Steinbright Career Development Center at Drexel University in Philadelphia, Pennsylvania, United States works with over 5,100 undergraduate students annually to secure six-month cooperative education work experiences. Approximately 90% of Drexel full-time undergraduate students will complete at least one co-op during their program. As part of co-op participation, students are asked to evaluate their experiences at the end of each work cycle. Additionally, employers are asked to rate student performance and make recommendations for coursework that might better prepare future co-op students. These evaluations are collected electronically and serve multiple purposes including student reflection and development; assessment and program planning support; and student learning assessment data for professional and institutional accrediting bodies. The Steinbright Career Development Center is responsible for the collection, compilation, and distribution of these evaluations and associated aggregate data to academic units across the University as well as for the communication and discussion of these evaluations with students through individual counseling.

Assessment supports institutional and program accreditation, curriculum review, strategic planning, and even plays a role in financial decision making (Gates et al, 2002). Moreover, programs are beginning to rely on assessment and evaluation to demonstrate that they are performing a needed, valuable service to students - especially when looking at programs and activities outside the classroom (Schuh and Upcraft, 2001). A 2008 study at the University of Cincinnati's Division of Professional Practice presents a case for a more clearly defined assessment plan that promotes transformational changes via corporate feedback. Since one of the primary goals of an undergraduate education is to prepare students for the workforce, it is advisable to consult that workforce to determine how well prepared students are (Cates and Cedercreutz). Contemporary assessment should be aligned with goals and used to improve teaching and learning (Suskie, 2009). Moreover, Drexel University, as an institution, is accountable to the Middle States Commission on Higher Education which outlines

fourteen key standards that it evaluates when determining if an institution is meeting its obligation to its student population and their educational needs (2006). The fourteenth standard is student learning assessment. It is here co-op evaluation data from the Steinbright Career Development Center at Drexel University can best be applied. It was imperative that the redesign of the entire co-op evaluation process manage the competing demands for the student and employer evaluations grounded in student learning assessment and cooperative education best practices while accounting for the unique nature of the undergraduate co-op program at Drexel University.

Prior to this project launch in the 2009-10 academic year, the student evaluations had not been revised since 2002, with employer evaluations being last revised in 2005. The introduction of the newly developed Drexel Student Learning Priorities (DSLPs) – eleven educational priorities designed by the University Committee on Learning Assessment to be the foundation of a Drexel undergraduate education, regardless of field of study (listed in Table 1) and the assessment of student performance as it relates to a student's identified major required that the existing evaluations be reviewed for content and structure. A lack of periodic review of the co-op evaluation process meant that evaluation criteria heavily aligned with programs accredited by the Accreditation Board for Engineering and Technology (engineering and computing disciplines) and the Association to Advance Collegiate Schools of Business (business and economics programs), which represented only 69% of the undergraduate co-op student population in the 2009-10 academic year. This disconnect left a considerable portion of the co-op student population with limited discipline-specific performance feedback, and the corresponding academic units received limited feedback on program and student performance. Moreover, there was minimal correlation between the existing evaluation questions and the Drexel Student Learning Priorities.

Research Methodology

The objective of this project was to overhaul the student and employer evaluations that are completed at the conclusion of each co-op cycle. This project was designed to be qualitative in nature, focusing on stakeholder focus groups and interviews to provide input and feedback on the redevelopment of the cooperative education evaluations. As a result, the following five research questions were developed to drive efforts:

1. What types of assessment methods are implemented at similar institutions with a focus on co-op and experiential education? How does the Steinbright Career Development Center at Drexel compare?

2. How do the Drexel Student Learning Priorities translate to tangible learning objectives for a cooperative education experience?

3. How can the Steinbright Career Development Center simultaneously improve its support of both University and program assessment needs?

4. How can the Steinbright Career Development Center streamline evaluation data distribution to academic partners to provide increased transparency, better access, and faster turnaround?

5. What other areas of improvement can be identified in discussions with academic partners to continue the improvement of co-op evaluations?

Research Design and Rationale

After preliminary discussion and analysis, a plan of action was devised to address the research questions this project posed. Five focus areas were identified:

1. Comparative review of peer institutions. Since there was limited documentation on how the former Drexel evaluations were developed, Steinbright solicited feedback from peer institutions on their co-op evaluation methods for students and employers. This feedback was requested via an email to the member mailing list of the Cooperative Education and Internship Association (CEIA), a professional organization promoting and supporting work-integrated learning. Respondents were asked to send information about or copies of their co-op evaluation methods.

2. Measureable objectives for the Drexel Student Learning Priorities. With the development of the Drexel Student Learning Priorities as proficiencies all undergraduate students should be exposed to as part of their education, it was necessary to formulate measureable objectives for these priorities. This process was initially conducted by the University Committee on Learning Assessment within the context of classroom application. From there, it was necessary to translate these objectives from an academic environment into a professional environment, placing an emphasis on direct and accessible language appropriate for evaluation in the workplace.

3. Interviews/discussions with academic units. With an emphasis on improving the support of program assessment and accreditation practices, it was important to meet with members of the University Committee on Learning Assessment to gather feedback on their knowledge of the co-op evaluations and its relevant data. Initial discussions identified a number of areas for review and prompted follow-up interviews with more engaged participants to further discuss their needs related to the evaluations and methods for data distribution. The Steinbright Employer Advisory Board, a group of executives representing the interests of Drexel co-op employers, and a subset of Steinbright's cooperative education coordinators familiar with the existing evaluations were also invited to participate in discussions about their experiences with the evaluations and their suggestions for potential improvement.

4. Focus groups with key stakeholders. Focus groups were developed and conducted after each set of evaluation revisions. These focus groups were comprised of different stakeholders in order to solicit a diversity of perspectives regarding revisions of particular interest or importance to their experience. These focus groups included current co-op students, members of the Steinbright Employer Advisory Board, faculty and/or assessment coordinators for each of the academic colleges/schools, co-op coordinators, representatives from the Office of the Provost, and the University Committee on Learning Assessment. Each session was approximately one hour in length and included a review of the proposed

evaluations and an opportunity to provide additional feedback and ideas that had not been discussed at earlier points in the process.

5. Technical capabilities to support assessment evolution. Periodic meetings were held with representatives from the Office of Academic Information and Systems (AIS). The co-op evaluation process is completely online and facilitated through SCDConline, Drexel University's proprietary online co-op job search and program management system. As a result, any efforts to revise the evaluations needed to be discussed with the AIS support team. These meetings covered topics including system constraints and functionality as it related to evaluation format, aesthetics, and options for an improved data analysis and reporting tool.

Research Results

The following is a presentation of the findings in response to the research questions that have guided this research project.

Evaluation Benchmarking with Peer Institutions. To find out what types of assessment methods are implemented at institutions with a focus on experiential education, an email was sent to 206 cooperative education and career services professionals at 134 institutions, identified by attendance at the 2009 annual conference for the Cooperative Education and Internship Association. Recipients were asked to respond with information related to their co-op experience evaluation and assessment practices. Though the response rate was low (~3%), the information collected from the University of Cincinnati Division of Professional Practice proved most valuable and comprehensive for comparison as the institution operates a program of similar size and scope as Drexel University.

The University of Cincinnati evaluations feature opportunities for the student and employer to evaluate student performance for a number of major categories such as communication, leadership, and professionalism, which are similar to Drexel's learning priorities. Both the students and employers are expected to consider not only the current experience, but how the student can better prepare

academically and professionally for future work experiences. These evaluations were the most directly comparable to Steinbright's existing evaluation methods and plans for future innovations.

One significantly missing assessment practice was an open-ended writing piece geared toward accomplishments or lessons learned over the co-op experience. The challenge faced at Drexel is that the evaluation of full essays for over 5,100 co-op students annually would be too cumbersome for the co-op staff to accommodate. However, the inclusion of a short essay for student reflection designed specifically for student development would be feasible; as the Drexel undergraduate co-op program is a pass/fail program, it would not be rated or graded.

Development of the Drexel Student Learning Priorities Criteria. The incorporation of ten of the eleven learning priorities (detailed in Appendix A) was the highest priority of the University Committee on Learning Assessment. The committee agreed with Steinbright that the Responsible Citizenship learning priority would not be included in the co-op evaluations since professional environments are not consistently geared toward public service. Moreover, service learning is managed by the Lindy Center for Civic Engagement and has stronger representation in other parts of the Drexel undergraduate student experience. To clearly articulate these learning priorities into measurable data points was challenging and deemed necessary to be included in a student's post co-op evaluation or an employer's evaluation of student performance. It was also highly desirable that each learning priority be mapped to at least two items on the evaluations. Lastly, the Steinbright Career Development Center required that the evaluations remain within their existing length for continuity and to minimize the impact of completion rates by students and employers.

An initial set of fifteen questions were created to evaluate the learning priorities. These fifteen evaluation items were presented to the aforementioned stakeholder focus groups as part of the revised evaluations. Fourteen iterations of the questions were completed as a result of the meetings and discussions held. The final set of fifteen evaluation questions and the map back to the Drexel Student

Learning Priorities can be seen in Table 1. Additionally, a 400-word reflective analysis requirement was added asking students to articulate how the co-op experience aligned with a professional, academic, or personal goal to encourage better integration of the co-op experience with the student's learning goals.

Table 1. Mapping of Evaluation Questions to Drexel Student Learning Priorities

	Communication	Creative and Critical Thinking	Ethical Reasoning	Information Literacy	Self-Directed Learning	Technology	Global Competence	Leadership	Professional Practice	Research, Scholarship, Creative Expression	Responsible Citizenship
Communicate effectively through writing (reports, emails, official letters, etc)	x								x		
Demonstrate effective verbal communication (discussion, presentations, etc.)	x								x		
Communicate appropriately with different audiences (colleagues, supervisors, clients, etc.)	x	x							x		
Provide feedback about assigned projects and tasks		x			x				x		
Contribute original and relevant ideas, strategies, or solutions		x			x			x		x	
Critically analyze and solve complex problems		x			x					x	
Uphold ethical standards in the workplace			x						x		
Make well-reasoned, data-supported decisions		x		x				x	x		
Use information effectively to accomplish a task				x					x		
Set goals and monitor progress					x			x			
Use appropriate technologies to accomplish a task		x				x				x	
Work effectively with people who have diverse backgrounds, beliefs, values, or behaviors							x	x	x		
Build professional relationships	x								x		
Improve skills important to success in a field or industry					x		x		x		
Effectively integrate into the workplace culture and hierarchy			x				x		x		
Count of Mapped Points	**4**	**6**	**2**	**2**	**5**	**1**	**3**	**4**	**11**	**3**	**0**

Program Assessment Support. Program assessment is essential to Steinbright's academic partners. Professionally accredited programs must demonstrate certain aspects of industry or discipline specific aptitude in their students to support the curriculum and preparation of students for success in a given industry. Co-op data is an excellent way to gain industry evaluation of student performance. Each college works with at least one professional accrediting body for undergraduate programs, while some work with multiple organizations because of the diversity of programs offered by a particular college or the complexity of a particular program.

After discussing program assessment needs in the focus groups, each college and school was given the opportunity to submit 5-10 questions, deemed College Learning Outcomes, for both the employer and student evaluations. The College Learning Outcomes could address very targeted aspects of the co-op experience and its connection to the academic program not otherwise addressed in the evaluations. All but two of Drexel's colleges and schools developed and launched questions on their evaluations beginning in Fall 2010. The College of Arts and Sciences did not add questions until Fall 2012 and the Goodwin School of Technology and Professional Studies chose not to include any questions.

Evaluation Data Collection and Distribution. Historically, the Steinbright Career Development Center has distributed evaluation data to the deans of all colleges and schools after the completion of a given co-op cycle. However, Steinbright staff had heard anecdotally from college representatives that the data was not always received or disseminated within the college/school to the appropriate parties, specifically those responsible for implementing curriculum review and change. A plan for a centralized dashboard to manage student and employer aggregate co-op evaluation for use by faculty and assessment liaisons in each college and/or school was developed.

Oracle Hyperion (Hyperion), the performance management software utilized by at Drexel, was chosen as the application for this dashboard as it is used for extracting large amounts of information

from SCDConline. While the Hyperion report would give academic partners the opportunity to access data in a single dashboard available to colleges/schools three months after a co-op cycle has ended, there were limitations identified. Individual college/school data cannot be shared across other colleges, so access needed to be designed such that each college would only see data for their programs, the college as a whole, and the Drexel aggregate for comparison. The second major limitation was that the report could only be designed to compile the quantitative data from the evaluations so reporting of free response questions still needed to be implemented manually. Lastly, the level of statistical analysis and aesthetic design of the reports needed to be reduced due to Hyperion's limited mathematics and design functions.

Continued Innovation and Quality Improvements. The focus groups provided a considerable amount of feedback for Steinbright, resulting in the support of both University and program student learning assessment. Moreover, these meetings fueled discussion on evaluation improvement ideas not previously considered and new projects to meet the needs of the University, Steinbright and its partners.

Throughout the focus groups, one common theme was the desire for a revised performance rating scale. The previous performance rating scale was basic, asking employers and students to complete evaluations using a scale of 1 (poor) to 5 (outstanding). Faculty requested a fully developed rubric for the evaluation outlining each question and the differences in performance on a 1 to 5 scale. When this rubric idea was presented to the Employer Advisory Board, it was agreed that a stronger evaluation scale would be useful, but an extensive rubric would be too much information and would not be utilized. Furthermore, employers expressed uncertainty about whom co-op students should be rated against: other co-op students or all employees at the organization? Since it is the philosophy of the Steinbright Career Development Center that employers should be managing and evaluating co-op students just as they would any other employee, it was determined that both employers and students should be evaluating performance as compared to other employees at the organization at the student's

experience level. Additionally, it was determined by Steinbright leadership that a point-by-point performance rubric would be beyond the scope of most employers' experience but there was an opportunity for clarity in the general performance measures as shown in Table 2.

Table 2. Revised Performance Rating Scale

Rating	Value	Explanation
Excellent	5	The student consistently performed at a superior level – one of the best in this category.
Very Good	4	The student consistently performed at a high level – above average in this category.
Good	3	The student consistently performed at an adequate level – average in this category.
Fair	2	The student inconsistently performed at an adequate level - below average in this category.
Poor	1	The student did not perform at an adequate level - well below average in this category.
Unable to Rate	0	The student was not exposed to this area during the co-op experience.

These efforts to revise and improve how Steinbright's co-op program could support the student learning assessment process were recognized in commendations from the evaluation team of the Middle States Commission on Higher Education during Drexel's decennial accreditation review. Specifically, the ability to directly assess student learning through co-op employers was identified as a data source "rarely available in American higher education [that provides] Drexel with a unique opportunity to understand student learning as it occurs and is applied in the workplace."

The Steinbright Career Development Center and its partners continued to recognized additional opportunities for improved utilization of the information provided by co-op student and employer evaluations for curriculum review, investigative purposes, and collaboration. Six projects grew directly from the initial evaluation redesign project.

As part of their designated College Learning Outcomes section, the LeBow College of Business added a question "What coursework were you able to use in this job?" Upon review of the data, the power of this question and what effect it could have on curriculum planning was revealed. Because of

the success, the question "What coursework did you apply most during your co-op?" was added for all students in Fall 2012.

The reflective analysis has provided Drexel University the opportunity to review student writing ability beyond the existing Freshman Writing Curriculum. The Writing Center has used these samples to evaluate student writing for clarity of thought and language, including comparison by College/Major, the number of co-op the student completed (1st, 2nd, 3rd and only) and domestic vs. international students.

Working with Dr. Donald McEachron, Academic Assessment and Quality Improvement Coordinator for the School of Biomedical Engineering, Science, and Health Systems, a 300-400 word reflective question was added to solicit student feedback on how well prepared the student felt in the workplace and what improvements could be made to increase preparedness and success on co-op. This reflective essay was designed to gain a clearer understanding of academic needs and preparation from the first-hand perspective of the students participating in co-op experiences. The pilot data is currently under review with the potential to add this question for all students.

The University is currently in year two of a planned five year Periodic Academic Review (PAR) which is similar to an outside accreditation for each department/program. The programs compose a self-study which is reviewed by outside evaluators, including faculty members at peer programs, and is led by the Office of Institutional Research, Assessment, and Effectiveness. Steinbright has provided the specific departments with many pieces of co-op employment information including multiple years of evaluation information as another form of direct assessment.

The College of Computing and Informatics uses co-op information for curriculum mapping and review. Courses have been added, removed or re-sequenced according to employer feedback. New concentrations and new undergraduate degrees have also been created to better prepare students to enter that computing industry.

Following the model of the co-op evaluations, the Senior Exit Survey, was redesigned to allow for the addition of the DSLPs and to give the academic departments the opportunity to ask questions of their specific students. The addition of the DSLP questions provides an opportunity to relate student answers from the Exit Survey to the co-op evaluations. The addition of specific questions for departments has been utilized by some to evaluate departmental specific learning objectives.

Conclusion and Next Steps

Three academic years (six co-op cycles) have now been concluded with the current survey instrument and dashboard. This provides enough data for a thorough review of the evaluations themselves as well as the current distribution methods. Although the evaluations have had been altered in a number of small ways, the core remains the same. A thorough review of the evaluations will be conducted in the summer of the 2013-14 academic year which will include returning to the key stakeholders for input and suggestions. At this time, the colleges will have the opportunity to change/update their college specific questions in order to better fit their needs.

The addition of the college specific dashboard has led to increased requests to see the evaluation data at a deeper level. The current system, Hyperion, does not allow for extensive analysis of data, which has led to a possible move to a new product: Baseline from CampusLabs. This new system will allow for easier exploration and distribution as well as having a more meaningful and organized dashboard of statistics. It will provide the ability to cut the data in many new ways including by class standing, number of co-op, and citizenship status. Academic partners will also be able to compare employer and student responses to the same question and look at individual questions over multiple co-op cycles. Lastly, they can also choose to create a new view of data that can be maintained through each successive co-op cycle.

The review and redesign of the student and employer evaluations has proven to be both necessary to the growth of student learning assessment through the Steinbright Career Development

Center and beneficial to the development of collaborative relationships within the University. As the Steinbright Career Development Center continues to grow its assessment practices in support of University and program assessment needs, the strides made with this project showcase the outcomes and capabilities possible through the department and the interest in joint projects to further the goals of all stakeholders.

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