Practice-Based Learning in Higher Education

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Abstract
Practice-based learning (PBL) has been a staple in higher education from inception; however, increasing challenges faced by institutions of higher learning to ensure that students receive value for their investment of time and money and are adequately prepared to meet the demands of the twenty-first-century workplace have fostered renewed interest in the implementation of PBL. This article provides a brief overview of the major characteristics, principles, and manifestations of the state of PBL across disciplines in universities and colleges.

Introduction
In the inaugural Gallup-Purdue index of 2014 that attempted to measure the educational experiences of over 30,000 college graduates to determine which of the three elements that pertained to feeling supported, and which of the three that pertained to experiential and deep learning were associated with "long-term measures of success" ("Six Sigma" 2014, 17), responding alumni strongly agreed that their education was worth the cost because they participated in the experiential learning opportunities provided by the university they elected to attend. These results implied to the administrators of the poll that the importance of a college education may hinge less on conventional indicators, such as reputation and money spent, and more by the factors that are not commonly measured, such as meaningful and authentic experiential learning opportunities and students' relationships and interactions with faculty.

These characteristics are indicative of the acknowledgement and implementation of High Impact Practices (HIPs) as a means of ensuring student success and thereby securing the future of educational institutions. According to the 2016 National Survey of Student Engagement (NSSE)

report, HIPs include learning communities, service-learning, community-based projects, research with faculty, internships or field experiences, teaching or clinical placement, study abroad opportunities, and/or a culminating senior experience. Though HIPs are often time and resource intensive, they "represent enriching educational experiences that can be life changing" for students (NSSE 2016, 15) They also help to prepare the student better for the world of work by its overall emphasis on "bridge to career" outcomes, while simultaneously facilitating personal growth and academic success.

The experiential component of HIPs has always played a key role in the disciplinary preparation geared toward professional practice, for example, in health sciences, education, and law. Kennedy et al. (2015) suggested that such programs have enjoyed traditions of support and well-established institutional arrangements. However, the increasing demand for these experiential learning opportunities across other courses of study within the university, largely in response to workplace trends, standards, and competencies, will hardly be met with the same traditions and institutional supports. One reason they identify that scenario is that the types of models and approaches that have traditionally been used in these disciplines, such as supervised placements, are "often not appropriate" or as readily available or created for other courses of study. Nevertheless, because the preferred outcomes of higher education tend to reflect and address the needs and concerns of the society and are more heavily influenced by state and religious stakeholders than educators themselves, provisions for this experiential dispensation will be made, despite constraints, should the urgency of the need intensify. Kennedy et al. (2015, 4–5) succinctly summarize the implications of this influence:

> Whilst those who teach have a range of legitimate concerns, orientations and preferences for how educational programs might progress, there is necessarily a strong set of institutional and societal imperatives sitting behind the provision of higher education programs.

The inherent tensions between the internal and perceived identity of academia promoting the enlightened mind, versus the economic realities of the needs of the workplace, position PBL in a perennially contested position. Lomas (1997) suggests that "to some, practice-based learning conveys connotations of manual effort," although that perception is gradually changing (as cited in Billet 2015, 6). To compensate for these contestations and protestations, Kennedy et al. (2015, 7) assert that "contemporary pressures for meeting the needs of occupations and their practice are emphasizing interdisciplinarity, problem-based, and professionally oriented approaches to higher education." PBL allows programs to incorporate and measure these characteristics without sacrificing intellectual

engagement and knowledge acquisition. The following sections and the other articles in this issue will address the many aspects of practice-based learning (PBL) that accomplish that objective.

DEFINITION AND THEORIES

The term *practice-based learning* (PBL) is often used interchangeably with *experiential learning*, which is simply learning by doing (Eyler 2009). Ambrose and Poklop (2015, 55) elaborate even further and explain:

> Experiential learning integrates theory and practice to promote deep and flexible learning . . . experiential learning is much more powerful and robust because it provides students with the opportunities to apply their knowledge and practice their skills in authentic, real-world situations, with all the contextual idiosyncrasies and unpredictability that entails.

Implicit within this delineation is the notion that these learning experiences enact in ways and settings that are quite distinct from the typical curricula exchanges within education settings. As such, PBL as a form of experiential learning is steeped in one or more theories of learning that incorporate the concepts of cognitive apprenticeship, transformative learning, social constructivism, and communities of practice.

Cognitive apprenticeship is perhaps one of the most salient frameworks through which we can examine the transactions and benefits of PBL. As a social constructivist theory, it brings tacit cognitive and metacognitive processes into the open, "where students can observe, enact, and practice them with help from a teacher [or mentor]" (Collins, Brown, and Newman, 1989, 4). It is closely aligned with the concepts of situatedness and legitimate peripheral participation as delineated by Lave and Wenger (1991). The latter speaks to the novice individual's desire or reluctance to move toward full participation, or the center, of a community of practice—a group of people with shared goals, interests, and intent. The former is a descriptor for active engagement in an authentic setting that "fosters relevant, transferrable learning much more than traditional information-dissemination methods of learning" (Dennen 2004, 814). Wertsch (1998)—as referenced in Dennen (2004, 814)—suggested that "human actions of any nature are socially situated, affected by cultural, historical, and institutional factors" and therefore must be "considered in a cognitive apprenticeship."

Cognitive apprenticeship involves many of the processes, both tacit and explicit, that support knowledge transfer in PBL. Enkenberg's (2001) list of methods, as cited in Dennen (2004, 503) includes

- modeling: meaning the demonstration of the temporal process of thinking;
- explanation: explaining why activities take place as they do;

- coaching: meaning the monitoring of students' activities and assisting and supporting them where necessary;
- scaffolding: meaning support of students so that they can cope with the task situation. The strategy also entails the gradual withdrawal of teacher from the process, when the students can manage on their own;
- reflection: the student assesses and analyses his performance;
- articulation: the results of reflection are put into verbal form; and
- explorations: the students are encouraged to form hypotheses, to test them, and to find new ideas and viewpoints.

These methods often lead to transformative learning, which, as Illeris (2009, 142) explains, are "personality changes or changes in the self." Patterson et al. (2015, 303) includes a response from their data set of student portfolio submissions in their article, "Transformative Learning: A Case for Using Grounded Theory as an Assessment Analytic," that perfectly encapsulates the essence of the internal transformative process:

> I am now much more aware of where I am, what I am doing, and what is going on around me. Now I feel that I can begin to critically engage with different situations and search for better ways in which I can engage with the rest of the world.

As expressed, it appears that the intersection between these theoretical internal processes and external conditions that facilitate the knowledge transfer through authentic experiences should be seamless in its realization in higher education contexts. However, as Willert, Keller, and Stegeager (2011, 174) caution when referencing the work of Schön (1987), "practice is neither structured through clear concepts, nor composed of repetitive methodological sequences . . . problems of practice are ill-defined and unique . . . the competent practitioner will make do with whatever options or possibilities the situation offers him." Therefore, the structure and implementation of activities and models through which PBL is performed is crucial to the success of its use. The most common forms of its expression associated with higher education are practicums, which can be manifested as internships, field studies, co-operative education, and clinical experiences. Authentic engagement through service learning or community-based participatory research is also deemed a method of PBL. These constructions will be discussed further in the next section.

PBL LEARNING ACTIVITIES IN HIGHER EDUCATION PROGRAMS

Practicums and Internships
As mentioned earlier, students place high value on the experiential learning options they were afforded during their tenure at university. Having reviewed the theory and advantage of experiential learning, it is easy to un-

derstand why they would embrace an opportunity to be actively engaged in a task guided by an expert in the field that would ultimately expand their cognitive and practical mindset. But are all PBL opportunities the same? Are there variances in the students'—and our—understanding of what these activities entail? The term *practicum* appears to be used as an umbrella term when referring to a "course or session of practical training, especially in teaching; a practical study, a research exercise" ("Practicum" 2017). Schön (1983) used the term reflective practicum, which he believed to be a pedagogical framework that served as "a training arena: a kind of sheltered workshop that allows trainees to explore work-related tasks from various angles—by active experimentation and by talking about them with co-trainees or trainers" (Willert, Keller, and Stegeager 2011, 174).

Ryan, Toohey, and Hughes (1996) attempted to delve further into the conceptions and value of the practicum by reviewing and critiquing the relevant literature at the time. They noted that there were contrasting views regarding the purpose of the practicum within the curriculum: the viewed expressed by Schön (as outlined above) and another one expressed by Price (1987, 356) who deemed the practicum to be "an opportunity to apply theoretical knowledge previously gained in campus-based activities." They reported that Schön's view did not garner much support in the scholarship at the time because it made "professional practice the core organizer of the curriculum." Kennedy et al. (2015, 5) acknowledge that this paradigm has significantly shifted, but the tensions may still prevail:

> So, a consequence of embracing practice-based experiences within our education programs is the coming together of practices and priorities within and outside of higher education institutions, sometimes mediated very strictly by occupational requirements and standards, as well as accrediting authorities. The bringing together of the values and practices of divergent communities necessarily leads to the jostling of cultures.

When we take a closer look at the range of PBL activities that are often used interchangeably with the term *practicum,* the complexity becomes more evident. For instance, O'Neill (2010, 6, 7) found some interesting differences among the descriptions of internships posted on university websites. One described it as an activity that "integrates career related experience into an undergraduate education through participation in planned, supervised work," while another defined it as "a supervised discipline-related work experience [involving] an intentional experiential learning strategy, an emphasis on professional development, performance assessments, and reflection and acknowledgment." Yet another labeled it as "a real world experience related to your career goals and interests. It may, but does not have to be related /connected to your academic major or minor." The point that O'Neill makes explicitly and illustrates through the range of definitions employed is that while there are common ele-

ments of reflection and supervision, not all internships are created equal and they may vary significantly "before a student takes a step to become involved in one."

O'Neill goes on to emphasize that the quality of an internship is undermined by inadequate development and implementation, in spite of the standards for quality disseminated by the Council for Advancement of Standards in Higher Education (CAS), and cites the critique offered by the Association of American Colleges & Universities (AAC&U) in 2007:

> Students today have many opportunities for "learning in the field," including service-learning courses, internships, cooperative education, and community-based research. . . . While all these experiences present rich opportunities for connecting knowledge with choices and action, too many are essentially "add-ons" in which students are left to their own devices for any insights gained. Students perform service on their own time; they find jobs and even internships independently of their academic studies.

Clinical Experiences

In disciplines and professions that require the successful completion of practicums for certification—often referred to as clinical experiences—there appears to be less ambiguity in the definitions employed and the processes established. The more pressing issue of discussion and research is adequate assessment of these practice-based courses. For example, Hayden, Dufel, and Shih (2002) discuss the development and use of the Evidence-based Quality Assessment (EBQA) developed by the Accreditation Council for Graduate Medical Education (ACGME) Outcome Project to de-emphasize the use of the traditional global evaluation in the assessment of resident competence in PBL. Price (2012) discusses the challenges inherent in utilizing the standards created by the Nursing and Midwifery Council related to learning and assessment in practice, and the reluctance on the part of mentors to make confident determinations of observable actions.

Cooperative Education

On the other hand, models of cooperative education seem to have achieved the perfect balance between effective organization and implementation and immersive work-based learning. In their case study, Ambrose and Poklop (2015, 55) discuss the successes and challenges of the cooperative education (CE) programs at Northeastern University and student perceptions of their involvement in these programs. They report that CE programs have been embedded for more than a century at Northeastern and, at the time of writing, there were "approximately 8000 students work[ing] for about 2900 employers each year for six-month periods of full-time employment," providing funding for students while simultaneously offering them opportunities to "extend and supplement the curriculum . . . [in

ways] that cannot be replicated in the traditional classroom settings." In a phenomenological study undertaken by the authors, they attempted to ascertain the extent to which students met the stated outcomes of the CE courses:

- To apply knowledge and skills in new, authentic contexts, thus gaining a deeper understanding (i.e., recognizing what to use, how, and when)
- To gain new knowledge and skills in order to engage in unfamiliar tasks, thus gaining the ability needed for continuous, life-long, self-directed learning
- To integrate and use the deepened and newly gained knowledge and skills in their academic programs
- To reflect on and articulate the above (i.e., discussing how they used their knowledge and skills, how they gained new knowledge and skills, and how theory and practice work together), thus developing skills of metacognition—another element of life-long, self-directed learning

Based on the analysis of the reflections of the 104 seniors who participated in the study, Ambrose and Poklop (2015, 56) found that the CE courses increased the students' motivation to learn as they were afforded opportunities for practice and feedback. The reflections also revealed that the CE courses promoted contextual knowledge and the transfer of understanding, and encouraged just-in-time learning, which, as affirmed by learning theories, leads to deep learning. One informant concisely expressed the cognitive connections and transfers between the learning in the classroom and the work site:

> You learn things in class that are necessary, but you might not always fully grasp everything that you're learning. . . . You think you're learning the stuff, but then you go out on co-op and you actually experience the things that you were learning in class, and you go, "Oh, this is what the professor meant by this." . . . That transfer from class to co-op has definitely helped me, as a chemist.

The conclusion that Ambrose and Poklop (2015, 54) were able to draw easily from the results of this study is that co-operative education allowed students to develop practical and intellectual advantages that made them more competitive in the job market. In conjunction with "increased confidence, clarity regarding career choices, meaningful experiences to list on resumes," these students can certainly claim that they derived significant value from the education they received at Northeastern.

Service Learning and Community-Based Participatory Research

While this model of "sandwiching" work and classroom study, as CE programs are also known, is one that effectively addresses the "bridge to career" preparation that is desirable in the wider employment market, ser-

vice learning opportunities are perhaps at the other end of the spectrum. Though this form of PBL has similar elements of authenticity, reflection, and relevance, its emphasis, as King (2004, 122) explains, is on "personal and communal benefits" that are derived "when students engage in meaningful community service activities that are integrally related to rigorous academic work." Like CE, King echoes other scholars' belief that service learning enhances the self-esteem, motivates students to learn, and fosters the development of problem-solving and leadership skills (as noted by Conrad and Hedin 1982). However, as King (2004, 123) also notes in his analysis that "some critical educators counter that these hypothesized benefits fail to materialize in practice [see Erickson and O'Connor 2000] . . . and that service learning may actually reinforce prejudice and replicate power differentials between those conferring and those receiving the service." This criticality of this power dynamic, which is often tied to social status, race, culture, language and geography, is certainly less of a consideration when navigating the practicum experience, and thereby much more difficult to successfully transact.

Much of these concerns are mediated by employing the principles of community-based participatory research (CBPR), which attempts to disrupt hierarchical structures and more equitably distribute the power among all participants. Because the invitation to participate is often generated by an institution serving the community in need of services they believe the university and its students can provide when other means are not available, they can maintain agency and ownership over the direction and products of the project undertaken (Kindon and Elwood 2009). Successful conceptualization and embedding of service learning in general, and CBPR more specifically, depends on the disposition, preparedness, and tolerance for ambiguity and uncertainty, and variances in the understanding of more formal research and learning processes. Kindon and Elwood (2009, 22) summarize these concerns as expressed by other scholars:

> Stoeker (1999) has questioned whether academics are, in fact, relevant to participatory forms of research because they can frequently inhibit local ownership and reinforce unequal power relations through their need to adhere to their own institutional agendas and requirements. Cancian (1993) has also raised concerns about the impacts that being involved in community-based PAR can have on academics' abilities to progress their own careers.

Nevertheless, the universities that successfully engage their surrounding communities are afforded special status, if they elect to seek it, in the form of the Carnegie Community Engagement Classification. To earn the classification, these universities must demonstrate the required assessment practices, productive reciprocal partnerships, faculty recognition for their engagement, and a clear commitment to prioritizing community engagement across the entire campus to maximize impact. (See website: https://

classifications.carnegiefoundation.org). Hence, students that are enrolled in community engagement courses that are created and implemented in such an environment are more likely to enjoy/derive the many stated benefits of this form of experiential learning.

Embedded Coursework
Meaningful PBL experiences can also take the form of coursework or laboratory practice or simulations. For example, many nursing and physician programs now employ the use of simulations as a pedagogical tool "to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion" (Gaba 2004, i2). The increased use of the technique is pursued in spite of the dearth of empirical evidence of its impact on patient outcomes (Aebersold and Tschannen 2013). Because the medical sciences are so reliant on PBL to successfully prepare practitioners and there continue to be more available job positions than there are people to fill them, it is no surprise that as a field they are looking for alternative ways to meet the market demands for qualified practitioners. Hopefully, this can be achieved without sacrificing the quality of the education received.

Perhaps a less controversial and ambiguous option is project-based learning, the other PBL, which "organizes learning around projects or complex tasks precipitated by an in-depth question or problem" (Sam Houston State University 2017). Like other more externally-oriented forms of PBL, this approach is recognized for its ability to offer similar advantages to students, including increased motivation, critical thinking skills, and increased awareness of and competence in professional work and standards. The learner-centered focus removes much of the authority of the instructor and promotes a more collegial and collaborative classroom environment. It can also more easily incorporate international opportunities through the use of web-based technologies. Nevertheless, it is not without its challenges, which Frank and Barzilai (2004, 43) encapsulate as the following (among others):

> . . . teachers' content knowledge, students' lack of experience in this new approach and their preference for traditional-structured approach; their preference for learning environment which require less effort on their part; and problems arising from time stress. Students struggling with ambiguity, complexity, and unpredictability and are liable to sense frustration in an environment of uncertainty, where they have no notion of how to begin or in which manner to proceed.

It is safe to say that no form of PBL is without its challenges, but the overt and tacit benefits to students, practitioners, academic institutions of higher learning, the workforce, and communities are certainly worth the effort of consideration.

PBL in This Issue of Library Trends

Having provided a perfunctory overview of the nature of PBL in higher education in this introductory piece, the articles in this issue will supply more targeted examples of the practical, hypothetical, and theoretical implications of PBL in LIS education and related fields. After another brief "Practice-Based Learning in LIS Education," Dr. Kate Marek, dean of the School of Information Studies at Dominican University, and Richard Kong, director of the Skokie Public Library follow with a "Case Study: Dominican University School of Information Studies and Skokie Public Library Internship Partnership"; a PBL opportunity that is open to all currently enrolled LIS students at Dominican in their final year, under the mentorship of one (or more) of the librarians at Skokie.

Dr. Ellen Rubenstein, assistant professor at the University of Oklahoma, then expounds on the importance of creating experiential learning opportunities for LIS students focused on consumer health information in her article entitled, "'I Didn't Learn that in Library School'—Experiential Learning in Consumer Health for Future Public Librarians." In the article, "Practice-Based Learning as a Tool for Developing Cultural Competence in Dietetics Education and Nutrition Science: Connections with Library and Information Science," Dr. Jill White, professor emerita, provides a closer look at the implementation of PBL in the Department of Nutrition and Dietetics at Dominican University in River Forest, Illinois, with particular attention to the ways in which these mandatory field experiences can be used to foster cultural awareness and competence. Finally, Dr. Bill Crowley, professor in the School of Information Studies at Dominican University, examines the nature and pitfalls of LIS practitioners' tacit knowledge with respect to the teaching of marketing and advocacy, as well as stakeholder relationships in "When Practitioners Get It 'Wrong': The Largely Under-Analyzed Failures of Professional Tacit Knowledge." It is hoped that the issue serves as a reminder or as an introduction to the scope and significance of PBL.

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