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Scholarly approaches to curriculum practice are critical to the success of undergraduate program reform.

The Scholarship of Curriculum Practice and Undergraduate Program Reform: Integrating Theory into Practice

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In a global higher education context of increasing competition for student recruitment, interinstitutional student mobility, credit transfer flexibility, and quality assurance policies, learning outcomes have become part of recent international trends in institutional, curricula, and pedagogical reforms, with profound effects on all aspects of curriculum development, implementation, and evaluation. Forty-five countries in the European Higher Education Union, for example, have recently signed the Bologna Agreement, whose accompanying quality assurance framework in part requires clearly defined program-level learning outcomes in approximately four thousand European institutions by the year 2010 (Australian Government, Department of Education, Science and Training, 2006; Bergen Communiqué, 2005).

Expectations of explicit learning outcomes and assessment policies in undergraduate curricula are also integral criteria established by the Council of Regional Accrediting Commissions (CRAC) in the United States for all seven agencies responsible for state universities and colleges. For example, successful accreditation of U.S. colleges or universities requires them to demonstrate that education is best experienced within a community of learning where competent professionals are actively and cooperatively

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involved with creating, providing, and improving the instructional program; learning is dynamic and interactive, regardless of the setting in which it occurs; instructional programs leading to degrees having integrity are organized around substantive and coherent curricula that define expected learning outcomes; institutions accept the obligation to address student needs related to, and to provide the resources necessary for, their academic success; institutions are responsible for the education provided in their name; institutions undertake the assessment and improvement of their quality, giving particular emphasis to student learning; and institutions voluntarily subject themselves to peer review (Eaton, 2007; CRAC, 2003).

Similarly the National Protocols, authorized by the Australian government, are a key element of the national quality assurance framework for Australian higher education. Essentially this framework regulates all higher education institutions (including thirty-eight public funded universities) and their courses to ensure the broad implementation of nationally agreed-upon objectives for Australian higher education (Ministerial Council on Education, Employment Training and Youth Affairs, 2006). In conjunction with the National Protocols, the Learning and Teaching Performance Funding serves to reward Australian higher education institutions that best demonstrate excellence in learning and teaching. This critical funding framework assesses institutions using explicit performance indicators (including learning-centered teaching practices and program-level learning outcomes such as students' demonstration of teamwork skills, problem solving, analytical skills, written communications, and self-directed learning skills) and, on this basis, awards substantial funding using a complex allocation formula (Australian Government Press, 2003; Australian Government, Department of Education, Science and Training, 2006).

Over the last five to ten years in particular, research universities in Canada have afforded special attention to the quality of undergraduate education and the demonstrable attributes of its graduates. More recently at the provincial level in Canada, guidelines have been established for degree-level expectations in Ontario's twenty publicly assisted universities (OCAV Report, 2005). Ontario's degree-level expectations originate from a Minister's Post-secondary Review Report of Higher Education, which recommended that every university in Ontario should implement the National Survey for Student Engagement (NSSE) in 2006–07 (Rae, 2005). The NSSE has been administered in over one thousand universities and colleges in North America and focuses on students' responses to approximately ninety questions pertaining to five broad areas of student engagement: level of academic challenge, active and collaborative learning, student-faculty interactions, enriching educational experiences, and supportive campus environment. The NSSE is widely recognized as providing reliable and valid indicators about the quality of undergraduate degree programs and lasting academic outcomes (National Survey of Student Engagement, 2007). However, despite this recent activity with degree-level expectations, learning out-

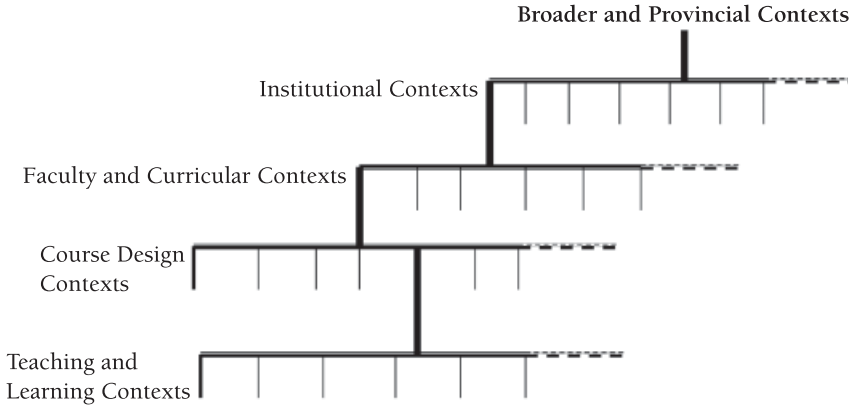
comes are not a new concept in higher education and are an integral part of diverse as well as contemporary notions of learning-centered undergraduate curricula (Bresciani, 2006; Daniel, 1993; Green, 1999; Mok, 1999).

Situating the Complexities of Undergraduate Curricula

First it is useful to provide an operational definition of learning-centered curriculum in higher education. We refer to curriculum as a coherent program of study (such as a four-year B.Sc.) that is responsive to the needs and circumstances of the pedagogical context and is carefully designed to develop students' knowledge, abilities, and skills through multiple integrated and progressively challenging course learning experiences.

Undergraduate curricula are thus complex and multifaceted processes shaped by many factors (social, political, economic, organizational, cultural, and individual); occur at various stages of development and perhaps reform; and involve people at several institutional levels in the teaching and learning context (administrators, curriculum development committee members and support team, instructors, and students) (Green and Kreuter, 1999; Wiles and Bondi, 2002). Program-level learning outcomes are a central component of learning-centered curricula. Learning outcomes can occur at many different levels (such as professional accreditation, quality assessment reviews, institutional planning, program development, individual course design), in the form of both top-down and bottom-up processing, each of which (and in various combinations) can have significant implications for implementation practices. Figure 1.1 illustrates the complex interconnections of learning outcome contexts.

Figure 1.1. Interconnected Model of Learning Outcomes in Various Undergraduate Program Contexts



Given this complexity and the many consequential complications, the localized development and declaration of program-level learning outcomes, as well as the careful integration and alignment of these outcomes within the curriculum, can be a major undertaking for most institutions and academic units. Developing, implementing, and evaluating learning-centered curricula are iterative processes that cannot be treated as discrete entities but rather must be carefully integrated. As a result it is imprudent for each entity to be considered the responsibility of completely different people (Diamond, 1998; Ewell, 1997; Fullan, 2001; Hubball and Burt, forthcoming; Ottoson and Green, 1987; Green and Kreuter, 1999; Murphy, 1997).

Traditional approaches to undergraduate programming in higher education, however, are often characterized by well-intentioned, select committees making ad hoc decisions about adding, modifying, or "tinkering" with individual course offerings. Such approaches pay little attention to integration and the scholarship of curriculum practice (SoCP), and they fail to address learning styles and the desirability of devising strategically placed and diverse learning experiences within the curriculum—such as prior learning assessment (PLA), capstone projects, field-based learning, interdisciplinarity, interprofessionalism, internationalization, and the use of learning technologies, simulation, and role playing. These approaches typically rely on students' efforts to make sense of the whole (if at all) from a broad set of often fragmented and unconnected individual course learning experiences. When attention has been afforded to learning outcomes in these contexts, the assessment procedures for measuring students' learning are often narrow, rigid, or at surface level—using, for example, simplistic right-or-wrong quiz questions or isolated behavioral checklists. So even where applied, learning outcomes have had a somewhat checkered past with very mixed reviews and levels of success or satisfaction in higher education (Baron, 1996; Ganderton, 1996; Gibbs, Dunbar-Goddet, Law, and Rust, 2006; Jansen and Christie, 1999).

Learning-Centered Approaches to Undergraduate Curricula: Integrating Theory into Practice

Learning-centered reforms in undergraduate programming are part of a larger process of institutional, curricula, and pedagogical reform in higher education (Barr and Tag, 1995; Hubball and Burt, 2004; Kupperschmidt and Burns, 1997; Parekh, 2007; Schneider and Schoenberg, 1999). The learning-centered curriculum has its pedagogical roots in constructivism and context-based learning theories and places emphasis on learning communities, curriculum cohesion and integration, diverse pedagogies, clearly defined learning outcomes, and the scholarship of curriculum practice (Barab and Duffy, 2000; Ewell, 1997; Gold, 1997; Hansman, 2001; Lave and Wenger, 1991; Wenger, 1998). The underlying assumptions about learning-centered curricula are that representative students, faculty, and stakeholders in the

broader context are active participants in the curricular reform process; that academic units are at different stages of curricular reform and will implement reform of curricula in diverse ways; that learning-centered curricula focus on contextually bound learning outcomes and integration of diverse pedagogies; and that learning outcomes focus on higher-order and integrated abilities about what students are expected to know and be able to do (demonstrating, for instance, critical thinking, responsible use of ethical principles, effective research, communication and problem-solving skills) in the context of a field of study, and are designed to be assessable, transferable, and relevant to students' lives as workers and citizens in a diverse world (Baird, 1996; Bresciani, 2006; Clanchy and Ballard, 1995; Cox and Richlin, 2004; Erickson, 2002; Hubball and Poole, 2004; Hubball and Burt, 2004; Kanpol, 1995).

In pragmatic ways, contemporary approaches to learning outcomes inform students about what they can expect to achieve from a program of study so they can organize their time and efforts, prepare for assessment, and see the links between and among segments of a curriculum, thus enhancing transferability of learnings. These approaches communicate curriculum and program goals in a meaningful way to a broader community, help determine the extent to which learning has been accomplished, and guide faculty and administrators (within resource constraints) in part to determine program(s) of study, course objectives, appropriate learning experiences, assessment, and program evaluation strategies (Nichols, 2002). It is important to emphasize that in order to meet the diverse needs and circumstances of undergraduate program contexts, no single implementation strategy or "cookbook" approach to curriculum development will suit all academic settings. Developing, implementing, and evaluating learning-centered curricula is thus a scholarly process. An institutional commitment to research, therefore, will likely improve the quality of undergraduate education and can dovetail with the scholarship of curriculum practice (SoCP).

The Scholarship of Curriculum Practice

Interestingly, while the scholarship of teaching and learning (SoTL) movement and literature have gained considerable recognition and momentum in recent years, much less attention has been afforded to the scholarship of curriculum practice (SoCP). At the very heart of SoCP is an approach to higher education programming that integrates curriculum and pedagogical research in the disciplinary context of a field of study. We introduce SoCP as a new and important concept to the field that contributes to an emerging scholarship on learning-centered undergraduate program reform. When we draw parallels with the SoTL literature, we must make an important distinction between scholarly approaches to curriculum practice and SoCP, although both provide tremendous impetus for the improvement of learning-centered curricula.

Scholarly approaches to curriculum practice can engage all faculty in reflecting on and initiating positive changes to course design and curriculum practices. Essentially scholarly approaches to curriculum practice are key for understanding student learning; for developing flexible, responsive, cohesive and integrated curricula; and for assessing whether and how curriculum learning experiences are effective at specific stages and in specific circumstances. Action research methodology is central to scholarly approaches to curriculum practice. Action research internalizes theory and practice through a systematic and cyclical process of inquiry that involves hypothesis testing, planning, observing, analysis, and action (Mills, 2000; Peterat and Smith, 2001; Sander and Halas, 2003). Essentially action research invites faculty and curriculum leaders to consider which research questions concerning program development, implementation, and evaluation are important; what data to gather; when and how to collect and analyze these data; how to initiate positive changes to practice; how to engage curriculum stakeholders in the process; and, finally, how this research might be of interest to the broader scholarly community. Data collection strategies from the research may be quantitative, qualitative, or both. Qualitative sources (such as Internet or documentation searches, course syllabi reviews, open-ended feedback forms and interviews, interpretation of teaching performances and learning experiences from video footage, students' assignments, workbook journals, and curriculum meeting notes) can be analyzed by categorizing data according to established criteria, major themes, and common or isolated experiences (Altrichter, Psch, and Somekh, 1993; Lincoln and Guba, 1985; Strauss and Corbin, 1998). Quantitative data sources (such as numeric performance and graduation records, number of learning outcomes and assessment methods, and rating and rank-order preference scales) lend themselves to categorization by descriptive statistics to determine frequency counts, means, and standard deviations or, if appropriate, by using more complex forms of analytical statistics. Appropriate combinations of qualitative and quantitative data can yield critical information to enhance program development, implementation, and evaluation (Bullough and Pinnegar, 2001; Wolf, Hill, and Evers, 2006). Action research, therefore, provides authentic data for use in evaluating the effectiveness of program processes and outcomes (by examining, for example, input from faculty members, practitioners, students, students' work, and course instructors' experiences). It can also engage key stakeholders in the process of further improving the program (Gold, 1997; Thompson, 1996).

The SoCP takes scholarly approaches to curriculum practice to another level of rigor and engagement by disseminating curriculum research in peer review contexts. Thus an operational definition of the SoCP is the ongoing learning and dissemination of practice-driven curricula research in peer review contexts. Three key themes are embedded in this definition: ongoing learning (through reflection, workshops, collaborative and self-directed projects, and literature reviews, for example), practice-driven curricula (focusing on contextually bound issues of programming, courses, classroom

experiences, and student learning), and peer review (dissemination of research through curriculum leadership, journal publications, grant writing, and conference presentations, for example). In addition to scholarly approaches to curriculum practice, SoCP has enormous potential for improving student learning because it critically impacts the quality of programming, course structures, and pedagogical experiences in which students learn. Furthermore, SoCP makes a broader scholarly contribution to undergraduate program reform and the enhancement of curriculum practices by raising critical questions for investigation such as these:

What is the purpose of a university, and how do undergraduate curricula serve this purpose?
What theoretical frameworks can inform curriculum practices?
How do perspectives of learning shape curriculum practices?
Who is responsible for undergraduate curricula?
How do programs reconcile quality and quantity of program-level learning outcomes?
How do we actually know that students are able to demonstrate these outcomes on completion of our degree program?
What relationships exist among program development, implementation, and evaluation?
By which means will we judge the quality or effectiveness of undergraduate programs? By learning context, process, impact, long-term follow-up evaluations, or some combination of these?

SoCP is not, however, a panacea for quality undergraduate programming, because of the considerable learning context challenges academic units typically face in developing, implementing, and evaluating learning-centered curricula—challenges such as existing academic workload stress, traditionally low priority for curriculum leadership, curriculum fatigue, or lack of local expertise in SoCP. Thus, when SoCP is combined and integrated with SoTL and the scholarship of educational leadership (SoEL), institutions and academic units are well equipped to engage in learning-centered undergraduate program reform. Consequently, if SoCP is not adequately supported, critical curriculum questions can present significant challenges for many faculty members and administrators. The magnitude of these challenges may become an outright deterrent for some academic units undertaking curriculum change (Drummond, Nixon, and Wiltshire, 1998; Kemp and Seagraves, 1995; Green, 1999; Schneider and Shoenberg, 1999; Shavelson and Huang, 2003). Critical examinations of an undergraduate curriculum should not be relegated to five-year summative data-gathering frenzies for institutional or accreditation reviews. Rather, undergraduate curricula should be considered scholarly, formative, and developmental review processes for all stakeholders in the program learning community. Thus responsibility for SoCP is shared at the institutional, faculty, and student

levels. At the institutional level there should be adequate incentives, rewards, and support structures for SoCP. At the faculty level there must be adequate attention to SoCP in the tenure and promotion process, curriculum leadership awards, curriculum excellence awards, curriculum innovation awards, institutional programs that focus on the SoCP, and curriculum support initiatives. At the student level, commitment to SoCP is evident in professional development and the quality of undergraduate programming.

Summary

Higher education organizations, institutions, and academic units globally are grappling with the challenges of redesigning curricula and developing and adopting institutional, professional, and program-level learning outcomes. Implementing learning-centered curricula, however, cannot be considered simply as a series of unproblematic and discrete steps. This special edition journal contributes to a growing body of literature and emerging discourse on philosophical orientations, theoretical concepts, principles, research, and practice implications of SoCP to enhance student learning in higher education.

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