

CURRICULUM

Arnold, G.B. (2004). Symbolic politics and institutional boundaries in curriculum reform: The case of national sectarian university. *Journal of Higher Education*, 75(5), 572-593.

This qualitative study uses a single case study method to examine how institutionalized elements of postsecondary organizations limit the scope of possible programmatic reform. Through document analysis and retrospective interviews of 12 key actors, 3 specific aspects of the curricular reform effort at a large, sectarian university were explored: 1) the relationship between planners and academic departments; 2) the integration of cultural diversity into the general education program; and 3) the creation of an oversight mechanism for the general education program. Findings suggest that curricular reform is most successful when it is mindful of conflicting values within the institution and when it recognizes the importance of symbolic, rather than systemic, outcomes.

Bahr, P.R. (2008). Does mathematics remediation work?: A comparative analysis of academic attainment among community college students. *Research in Higher Education*, 49(5), 420-450.

The effectiveness of community college remedial math programs was examined in this study. Using an analytical cohort of 85,894 students enrolled in 107 semester-based community colleges in California, the author employed hierarchical multinomial logistic regression to test the relationship between math status and academic attainment. After controlling for a number of student-level (sex, race/ethnicity, age, socioeconomic status, enrollment patterns, academic goal, grade in first math class, English competency, and interaction with academic advising services) and institution-level (institutional size, math competency of entering students, and college goal orientation) variables, analyses show that while community college students who remediate successfully in math achieve academic attainment comparable to their better-prepared peers, overall rates of successful remediation are very low (<25%).

Colbeck, C.L. (2002). Assessing institutionalization of curricular and pedagogical reforms. *Research in Higher Education*, 43(4), 397-421.

This study sought to determine the relative impact of regulative (rule setting, monitoring, and sanctioning), normative (morally and legally correct), and cognitive (acceptance and practice) institutionalization processes on the persistence of curricular and pedagogical reform efforts within the context of the field of engineering. Phase one of the study involved developing a process model for likely diffusion of curricular and pedagogical reform based upon qualitative interviews of 127 individuals (29 administrators, 10 principal investigators, 53 faculty, and 38 staff) at 7 Engineering Coalition for Excellence in Education and Leadership (ECSEL) colleges. Data analysis revealed regulative (accreditation, operating budget, curricular requirements, and

faculty rank), normative (support for teaching), and cognitive (beliefs about learning, teaching practices, and reform involvement) institutionalization of reforms. Phase two of the study involved testing the process model through further data collection, including qualitative interviews of 24 individuals (7 deans/associate deans, 10 department heads, 7 principal investigators), course reports completed by local evaluators at all 7 ECSEL colleges, and the ECSEL Faculty Survey completed by 291 faculty from 7 ECSEL institutions. Factor analysis was employed to determine item groupings for three dependent variables: changes in curricular content, pedagogical methods, and sensitivity to the needs of diverse students. Logistic regression analysis revealed that normative (e.g., perceived support for teaching) and cognitive (e.g., student-centered teaching practices) institutionalization processes produced a greater diffusion of curricular and pedagogical reforms than regulative institutionalization processes.

Lambert, A.D., Terenzini, P.T., & Lattuca, L.R. (2007). More than meets the eye: Curricular and programmatic effects on student learning. *Research in Higher Education*, 48(2), 141-168.

This study attempted to understand how changes in engineering program characteristics (as mandated by the new “EC2000” accreditation standards) affect student educational experiences, and how these experiences, in turn, affect student learning outcomes. Using a pre-test/post-test, cross-sectional, ex post facto research design, the authors surveyed 4,543 graduating seniors, 1,272 faculty members, and 147 department chairs from 39 campuses. After conducting factor analysis, two composite dependent variables (group skills and design/analytical skills) and five composite independent variables (student precollege characteristics, institutional characteristics, program characteristics, faculty instructional practices/attitudes, and student in- and out-of class engineering activities) were selected for hierarchical ordinary least squares (OLS) multiple regression analysis. Results indicated that program characteristics and faculty practices indirectly affect student development of analytical and group skills by fostering experiences such as clearly organized classroom activities, collaborative learning, instructor interaction and feedback, an environment open to difference, a positive program climate, professional internships, design competitions, and professional society chapters.

Harper, B.J., & Lattuca, L.R. (2010). Tightening curricular connections: CQI and effective curriculum planning. *Research in Higher Education*, 51(6), 505-527.

This study examined how use of continuous quality improvement (CQI)—a management approach seeking to accomplish institutional mission through the systematic, empirical measurement of organizational outcomes—affects academic outcomes. After drawing a disproportionate stratified random sample from a nationally representative dataset (Engineering

Change) of self-reported data from faculty and recent graduates of ABET-accredited engineering programs, Hierarchical Linear Modeling and Structural Equation Modeling were used to examine how the relationship between student pre-college characteristics, institutional characteristics, student experiences, student learning outcomes differed according to institutional use of CQI. Results suggest that institutions employing CQI methods offer a more seamless educational program for students by effectively linking curricular and co-curricular experiences, thereby having a positive influence on student learning outcomes.

Nelson Laird, T.F., & Garver, A.K. (2010). The effect of teaching general education courses on deep approaches to learning: How disciplinary context matters. *Research in Higher Education*, 51(3), 248-265.

Operationalizing the concept of deep learning by combining three constructs—higher-order learning, integrative learning, and reflective learning—this study sought to understand how faculty teaching practices in general education courses (GECs) differ by disciplinary context. After coding academic disciplines according to Biglan’s classification (hard vs. soft, pure vs. applied, life vs. non-life), multiple regression was performed using self-reported data from the 2007 administration of the FSSE (7,960 faculty from 101 institutions). Study results suggest that although faculty pedagogy in GECs differs by disciplinary area, faculty who teach GECs tend to emphasize deep approaches to learning more than those who do not teach GECs.

Nelson Laird, T. F., Niskode´-Dossett, A. S., & Kuh, G. D. (2009). What general education courses contribute to essential learning outcomes. *Journal of General Education*, 58(2), 65–84.

Using a sample of 10,897 faculty (5,231 GEC and 5,666 non-GEC) who completed the FSSE, this study sought to compare how faculty emphasis of effective educational practices varies according to status as a General Education Course (GEC) instructor. Comparison of mean differences in self-reported scores yielded significant effects sizes for GEC instructors in the areas of intellectual and practical skills, individual and social responsibility, and high-impact pedagogy. Findings suggest that faculty who teach General Education Courses are more likely than their non-GEC teaching peers to foster a number of positive student learning outcomes in their classrooms, such as clear writing and speaking, critical thinking, self-directed learning, self understanding, understanding of people from differing racial/ethnic backgrounds, developing a personal code of values, developing a deepened sense of spirituality. Moreover, GEC faculty are more likely to employ deep approaches to learning, integrative learning, and diverse classroom interactions.

Nelson Laird, T.F., Shoup, R., Kuh, G.D., & Schwarz, M.J. (2008). The effects of discipline on deep approaches to student learning and college outcomes. *Research in Higher Education*, 49(6), 469-494.

Operationalizing the concept of deep learning by combining three constructs—higher-order learning, integrative learning, and reflective learning—this study examined how disciplinary context related to faculty use and student experience of deep learning approaches, as well as how use of deep learning approaches related to student educational outcomes. After coding academic disciplines according to Biglan’s classification (hard vs. soft, pure vs. applied, life vs. non-life), multiple regression was performed using self-reported data from the 2005 administration of the NSSE and the FSSE (80,124 senior students from 517 institutions and 10,365 faculty from 109 institutions). Findings suggest that deep approaches to learning are used more often by faculty and students within fields characterized by lower levels of consensus with regards to content and methods of inquiry. In addition, while students who engaged in deep approaches to learning reported a higher level of personal satisfaction with their educational experience, the relationship between grades and student use of deep approaches to learning was found to be weak.