

1 *The scholarship of practice consists of three levels. This chapter describes progress toward the attainment of these levels using the types of professional knowledge published in the core journals of higher education.*

Contributions to Types of Professional Knowledge by Higher Education Journals

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The scholarship of practice in higher education embraces two primary goals: the improvement of administrative practice and the development of a knowledge base for administrative work in higher education (Braxton, 2005). Both of these goals transpire through empirical studies directed toward the acquisition of Eraut's (1988) replicative, applicatory, and interpretative forms of knowledge (Braxton, 2005). In the Editor's Notes for this volume, Braxton expands the notion of the scholarship of practice to include the use of findings of empirical research as a basis for the development of institutional policy and practice by practitioners in individual colleges and universities.

We assert herein that these formulations suggest that a scholarship of practice for higher education consists of three levels arrayed in increasing degrees of complexity and difficulty of attainment. Level One entails the use of the findings of empirical research as a basis for the development of institutional policy and practice. The feasibility of this level depends on the inclination of institutional practitioners in individual colleges and universities to use empirical research to inform policy and practice at their college or university.

Level Two includes empirical research directed toward the acquisition of replicative, applicatory, and interpretative forms of professional knowledge to guide or improve administrative practice. The attainment of this level depends on the publication of articles directed toward the replicative, applicatory, and interpretative forms of professional knowledge as a field of study by the core journals of higher education.

Level Three involves the development of a knowledge base for administrative practice in higher education that makes use of empirical research directed toward the acquisition of replicative, applicatory, and interpretative

forms of professional knowledge. These three forms of professional knowledge contribute to the development of an abstract body of knowledge organized into a codified set of principles (Goode, 1969). However, the attainment of such a knowledge base remains elusive for two key reasons. First, such a knowledge base would not be unitary in its structure because administrative work in higher education consists of different segments of practice organized around different roles and functions such as the president, the chief academic officer, chief student affairs officer, institutional advancement director, and admissions officer (Braxton, 2005). Discrete knowledge bases for each of these segments are critically important to guide the practice of different segments of administrative practice. Although many leaders of colleges and universities still follow the “scholar” path in their ascendancy to leadership, increasingly higher education administrators enter administrative ranks from other fields or positions (Birnbaum & Umbach, 2001). Second, these discrete knowledge bases also need to include an array of topics critical to practice. Moreover, each critical topical area requires a depth of coverage sufficient to guide practice. As a consequence, the attainment of Level Three of a scholarship of practice stands as an elusive and lofty goal.

This chapter focuses attention on the achievement of Level Two of the scholarship of practice in higher education by asking the question: What percent of the articles published in the core journals of higher education—*The Review of Higher Education*, *The Journal of Higher Education*, and *Research in Higher Education*—between 1996 and 2016—are directed toward replicative, applicatory, and interpretative forms of professional knowledge described by Eraut (1988)?

To address this research question, we conducted a content analysis of articles published between 1996 and 2016 in these three core journals. We classify the articles according to the forms of professional knowledge they produce. Because we classify articles by three of the forms of professional knowledge described by Eraut (1988), we describe these three forms next.

Eraut’s Forms of Professional Knowledge

Professional practice requires employing multiple types of knowledge. According to Michael Eraut (1988), they can be defined as fourfold: replicative, applicatory, interpretative, and associative. Replicative knowledge involves familiarity with the requisite routines of the role. It is practical knowledge that requires little to no processing and is often used by professionals in routine tasks or interactions. Applicatory knowledge involves the translation of technical knowledge into plans for action. Applicatory knowledge is previously rehearsed knowledge that can be applied across settings or contexts. Taken together, replicative and applicatory knowledge are the practical and technical modes of knowledge that guide professional practice. Interpretative knowledge relies on wisdom and judgment on the

part of the user. The interpretative mode relies on perspective and on professional paradigms.

Associative knowledge is less tangible. Associative knowledge involves intuition, guiding metaphors, and images that invoke symbolic meaning. Both interpretative and associative knowledge lie at the intersection of deep understanding and professional judgment. However, Braxton (2005) asserts that associative knowledge is more likely attained through personal experience and interactions with others than through scholarship. For this reason, we do not include articles directed toward the development of associative knowledge in our content analysis. Rather, the basis for our classification of articles is limited to three types of knowledge: replicative, applicatory, and interpretative.

Methods

As previously stated, our methodology is content analysis, a systematic research method in which textual information is coded in a standardized way in order to allow for inferences to be drawn through analysis that involves counting, pattern deduction, and comparing, contrasting, and categorizing elements of text (Krippendorff, 1980; SAGE, n.d.; Weber, 1990). Content analysis allowed us to classify key modes of knowledge production in the extant literature.

Archives of the three journals were consulted in order to pull the citation information and the abstracts of articles during the period of interest. Abstracts were used in the classification, or coding, process. Consequently, articles were read for topic (role performance, administration, organization, faculty, enrollment management, curriculum, students), methodology (empirical, scholarship of teaching, wisdom of practice), the type of institution that was the focus of the study (two-year, four-year, public, private), whether the study took place over one or multiple years, and the mode of knowledge production, as defined by Eraut (1988). We focus on institutional, not state or federal, policy because of our interest in administrative practice. We do, however, pay attention to the intersection of institutional and state policy. The categorical variables we define are exhaustive and exclusive. The unit of analysis is the article. If we determined that articles did not contribute to the scholarship of practice, they were excluded from the sample. There is no risk of intercoder reliability issues because the sample of documents for this chapter were read and coded by a single member of the research team. Single coding may, however, raise validity issues.

In making classifications, we considered characteristics of the three modes of knowledge (Table 1.1). These questions guided this classification: *What can practitioners learn from this article? How would they use this knowledge at their institutions?* Additionally, a number of words and phrases that signaled which mode of knowledge was being produced by the research

Table 1.1. Characteristics Utilized for Classification

Modes of Knowledge		
<i>Replicative</i>	<i>Applicatory</i>	<i>Interpretative</i>
<i>Characteristics</i>		
<ul style="list-style-type: none"> • Practical knowledge 	<ul style="list-style-type: none"> • Technical knowledge in action 	<ul style="list-style-type: none"> • Understanding, wisdom, and judgment
<ul style="list-style-type: none"> • Routines, repetitive tasks 	<ul style="list-style-type: none"> • Working with rules and procedures to translate knowledge into action 	<ul style="list-style-type: none"> • Professional judgment—practical wisdom, a sense of purpose, appropriateness, and feasibility
<ul style="list-style-type: none"> • Acquisition and rehearsal are similar 	<ul style="list-style-type: none"> • Knowledge that has been coached and rehearsed in another setting, but now is being applied to a new setting 	<ul style="list-style-type: none"> • Concepts and theories from disciplines provide practitioners/researchers with ways of construing situations
<ul style="list-style-type: none"> • Doesn't require processing or reorganization of knowledge 	<ul style="list-style-type: none"> • Use knowledge to prescribe action; normal to describe use of actions as right or wrong 	<ul style="list-style-type: none"> • Perspective turned into action • Emerging issues of importance
<i>Words, verbs, operatives</i>		
<ul style="list-style-type: none"> • Reflect • Represent • Portray • Reproduce • Imitate 	<ul style="list-style-type: none"> • Translate, translation • Appropriate, Inappropriate • Adapt, adaptation • Application 	<ul style="list-style-type: none"> • Perspective • Judgment • Mission-driven • Interpretation

were consulted. We coded articles that contributed to the scholarship of practice as producing a single mode of knowledge.

Results

Analysis focused on the presence of variables and their frequency or identity by journal and over time. After reviewing the titles and abstracts of all of the articles published between 1996 and 2016 in the three journals ($N = 1745$), 676 articles were identified as the sample (38.7%; see Table 1.2). Most studies examined single institutions or multiple public institutions; the largest other group of studies utilized national datasets. We identified

Table 1.2. Summary of Classification by Journal and Year

Year	<i>Journal of Higher Education</i>			<i>Review of Higher Education</i>			<i>Research in Higher Education</i>		
	Volume	Population	Sample	Volume	Population	Sample	Volume	Population	Sample
1996	67	27	6	20	20	3	37	31	17
1997	68	26	12	21	23	6	38	36	21
1998	69	26	4	22	20	13	39	33	18
1999	70	38	17	23	22	11	40	36	16
2000	71	28	6	24	21	9	41	34	10
2001	72	26	6	25	21	5	42	32	16
2002	73	26	5	26	23	6	43	28	10
2003	74	27	7	27	22	14	44	31	11
2004	75	27	9	28	24	17	45	40	16
2005	76	25	8	29	18	12	46	36	14
2006	77	29	7	30	16	7	47	37	14
2007	78	24	9	31	17	10	48	33	12
2008	79	27	12	32	18	8	49	39	17
2009	80	27	6	33	17	12	50	38	21
2010	81	29	12	34	20	11	51	37	13
2011	82	32	7	35	23	12	52	40	13
2012	83	33	12	36	23	11	53	37	8
2013	84	32	7	37	17	12	54	37	11
2014	85	31	9	38	18	9	55	34	10
2015	86	30	12	39	19	11	56	36	16
2016	87	30	4	40*	5	5	57	33	11
Total		600	177		407	204		738	295
Avg		28.6	8.43		19.5	9.7		35.1	14.0

Note: Population = total articles published; Sample = scholarship of practice; *To date

articles across the three modes of knowledge. Of the articles, 278 (41% of the sample; 16% of population) produced knowledge that was replicative in nature, 252 (37% of sample; 14% of population) produced applicatory knowledge, and 146 (22% of sample; 8% of population) produced interpretative knowledge.

The average number of articles contributing to the scholarship of practice by journal varied to some degree. *The Review of Higher Education* (see Table 1.3a) averaged roughly 10 per year in a fairly tight distribution, while *The Journal of Higher Education* (see Table 1.3b) was more variable and averaged roughly eight per year. *Research in Higher Education* (see Table 1.3c) published roughly 14 articles per year in the scholarship of practice sample. There were 135 descriptive studies, mainly meta-analyses or reviews of the extant literature. Of the empirical studies ($N = 541$), 24% were qualitative. The design of most studies was cross-sectional observation, or survey. Approximately one quarter of studies were longitudinal in nature (i.e., observations gathered over more than 1 year). Randomization in the studies was much rarer: *The Review of Higher Education* and *The Journal of Higher*

Table 1.3a. Detailed Classification for *The Review of Higher Education* by Mode and Year

The Review of Higher Education							
Year	Volume	Population	Sample	Replicative	Applicatory	Interpretative	% Classified
1996	20	20	3	2	0	1	0.150
1997	21	23	6	2	1	3	0.261
1998	22	20	13	3	7	3	0.650
1999	23	22	11	5	4	2	0.500
2000	24	21	9	4	4	1	0.429
2001	25	21	5	1	3	1	0.238
2002	26	23	6	3	3	0	0.261
2003	27	22	14	2	7	5	0.636
2004	28	24	17	4	7	6	0.708
2005	29	18	12	4	4	4	0.667
2006	30	16	7	2	1	4	0.438
2007	31	17	10	4	5	1	0.588
2008	32	18	8	2	3	3	0.444
2009	33	17	12	4	7	1	0.706
2010	34	20	11	6	3	2	0.550
2011	35	23	12	3	8	1	0.522
2012	36	23	11	6	2	3	0.478
2013	37	17	12	5	2	5	0.706
2014	38	18	9	5	1	3	0.500
2015	39	19	11	5	2	4	0.579
2016	40*	8	5	0	5	0	0.625
Total		407	204	72	79	53	
Avg		19.5	9.7	3.4	3.8	2.5	0.506

Note: Population = total articles published; Sample = scholarship of practice; *To date

Education each had two scholarship-of-practice articles in which the studies utilized some randomization; *Research in Higher Education* had 10 articles in the sample that utilized some randomization.

Much of the interpretative knowledge produced toward a higher education scholarship of practice developed as emerging issues of importance or new perspectives on important topics. For instance, in *Research in Higher Education* in the mid- to late 1990s, articles producing interpretative knowledge focused on the shift from considering college access to college retention and attainment, as well as emerging conversations about gender equity in the academy with regard to hiring, tenure, and pay. Early articles on such topics contribute to the interpretative knowledge base and pave the way for replicative and applicatory knowledge production as scholarly work comes to reflect practical and routine knowledge or technical knowledge applied to novel contexts.

Most of the articles addressed one of the previously defined topics, whereas some contended with multiple topics. Although these topics were generally spread over the 20-year period, special issues created high

Table 1.3b. Detailed Classification for the *The Journal of Higher Education* by Mode and Year

Year	The Journal of Higher Education						% Classified
	Volume	Population	Sample	Replicative	Applicatory	Interpretative	
1996	67	27	6	3	1	2	0.222
1997	68	26	12	5	2	5	0.462
1998	69	26	4	2	1	1	0.154
1999	70	38	17	7	2	8	0.447
2000	71	28	6	1	0	5	0.214
2001	72	26	6	2	3	1	0.231
2002	73	26	5	2	3	0	0.192
2003	74	27	7	2	3	2	0.259
2004	75	27	9	2	5	2	0.333
2005	76	25	8	4	2	2	0.320
2006	77	29	7	2	4	1	0.241
2007	78	24	9	3	5	1	0.375
2008	79	27	12	0	7	5	0.444
2009	80	27	6	1	4	1	0.222
2010	81	29	12	3	8	1	0.414
2011	82	32	7	3	2	2	0.219
2012	83	33	12	3	3	6	0.364
2013	84	32	7	0	4	3	0.219
2014	85	31	9	3	5	1	0.290
2015	86	30	12	3	3	6	0.400
2016	87	30	4	2	2	0	0.133
Total		600	177	53	69	55	
Yearly avg		28.6	8.4	2.5	3.3	2.6	0.293

Note: Population = total articles published; Sample = scholarship of practice

density on areas of contemporary importance during the period of review. With regard to faculty, most articles were related to tenure, either in structures surrounding the review process or the trend toward more contingent faculty. These articles were classified as contributing to either applicatory or interpretative forms of professional knowledge.

The student-experience articles largely focused on postsecondary transition, supports, and outcomes for students by race, first-generation status, and gender. Many of the student-centered articles focused on extracurricular institutional programming and supports and research-mentoring by faculty. These student-centered articles were classified as either contributing to replicative or applicatory forms of professional knowledge.

In the realm of administration, the research largely fell into three areas: leadership in practice, institutional structures, and finances. Organizational structure among staff and faculty was a frequent topic of study during this period. These administratively focused articles were mostly classified as contributing to applicative forms of professional knowledge.

Table 1.3c. Detailed Classification for Research in Higher Education by Mode and Year

Year	Research in Higher Education						% Classified
	Volume	Population	Sample	Replicative	Applicatory	Interpretative	
1996	37	31	17	10	5	2	0.548
1997	38	36	21	6	11	4	0.583
1998	39	33	18	7	5	6	0.545
1999	40	36	16	9	6	1	0.444
2000	41	34	10	2	7	1	0.294
2001	42	32	16	3	9	4	0.500
2002	43	28	10	4	5	1	0.357
2003	44	31	11	6	5	0	0.355
2004	45	40	16	6	7	3	0.400
2005	46	36	14	6	7	1	0.389
2006	47	37	14	6	5	3	0.378
2007	48	33	12	10	2	0	0.364
2008	49	39	17	12	4	1	0.436
2009	50	38	21	13	5	3	0.553
2010	51	37	13	7	4	2	0.351
2011	52	40	13	7	5	1	0.325
2012	53	37	8	5	1	2	0.216
2013	54	37	11	9	1	1	0.297
2014	55	34	10	7	2	1	0.294
2015	56	36	16	9	6	1	0.444
2016	57	33	11	9	2	0	0.333
<i>Total</i>		738	295	153	104	38	
<i>Avg</i>		35.1	14.0	7.3	5.0	1.8	0.400

Note: Population = total articles published; Sample = scholarship of practice

Nevertheless, some of these articles were viewed as interpretative professional knowledge.

Curriculum articles, which were largely classified as applicatory and to some extent interpretative, contended with faculty perceptions of and adoption to trends in undergraduate teaching and learning during this period: service-learning, technology, and undergraduate research.

We found there to be greater evidence of a scholarship of practice than we anticipated. Much of the knowledge generated by studies holds utility for administrators of varying capacities and seniority. Although the bulk of the replicative and applicatory knowledge generated was important in its ability to describe the current characteristics and challenges of the contemporary college student, it appeared, however, to be less useful as a roadmap for successful practice. Perhaps this perception of limited utility derives from the difficulty of crystallizing deep professional knowledge into article-length pieces; perhaps these ends are better achieved through volumes and books.

Limitations

This content analysis has a number of limitations. Our population of articles was limited in scope by our decision to review only 20 years of scholarship from three premier higher education journals. Future work may consider the inclusion of a scholarship of higher education practice in other higher education journals or journals of other fields (e.g., human resources, management).

Additionally, in our classification of articles according to Eraut's (1988) typology of knowledge production, we chose to forgo the category of associative knowledge. This decision was made because associative knowledge is most frequently derived from personal experiences or interpersonal interaction, not scholarship. It may be of interest for future scholarship to consider the degree to which higher education administrators rely on associative knowledge or their relative use of associative knowledge and Eraut's other three forms.

Although content analysis has safeguards against distortions of evidence, evaluator judgment is a factor in coding the data. The coding scheme developed by the research team was strictly adhered to and periodically reflected upon to ensure internal consistency.

Conclusions

Elsewhere in this chapter we described three levels of a scholarship of practice in higher education. Accordingly, we posit that the findings of this chapter suggest the following three conclusions about the attainment of these three levels of the scholarship of practice in higher education.

1. Level One of a scholarship of practice currently exists in the literature produced by articles published in *The Review of Higher Education*, *The Journal of Higher Education*, and *Research in Higher Education* and between 1996 and 2016. To elaborate, the findings of this chapter indicate that more than 60% of the articles published in these three core journals produced either understanding of some aspect of higher education or implications for federal and state policy making. Moreover, the remaining proportion of the articles published pertains to one of the three forms of professional knowledge delineated by Eraut (1988). Such articles supply institutional practitioners with research findings suitable for the development of institutional policy and practice—Level One of the scholarship of practice in higher education.
2. Some degree of progress toward the attainment of Level Two of a scholarship of practice has transpired during the past 20 years. The findings of this chapter indicate that almost two-fifths (38.7%) of all of the articles published in *The Review of Higher Education*, *The Journal*

of *Higher Education*, and *Research in Higher Education* between 1996 and 2016 were directed toward the attainment of replicative, applicatory, or interpretative forms of knowledge for professional practice in higher education. These three forms of professional knowledge each contribute to the improvement of administrative practice in higher education.

3. The extent of movement toward Level Three of a scholarship of practice, the development of a knowledge base for administrative practice, remains uncertain. We do know that almost two-fifths (38.7%) of all the articles published in the three core journals between 1996 and 2016 were directed toward the attainment of replicative, applicatory, or interpretative forms of knowledge for professional practice in higher education (Level Two). To be sure, such knowledge creation works toward the development of a knowledge base for administrative practice. However, the issues with the attainment of Level Three previously presented in this chapter remain unanswered and are beyond the scope of the current study. The first issue pertains to segmentation of administrative practice for different roles and functions such as the president, the chief academic officer, chief student affairs officer, institutional advancement director, and admissions officer (Braxton, 2005). Discrete knowledge bases for each of these segments loom important to guide practice. Secondly, these discrete knowledge bases also need to include an array of topics and a depth of topic coverage critical to practice. The creation of textbooks on the various segments of administrative practice provides a marker for progress toward the attainment of Level Three of the scholarship of practice. For example, a textbook on the role and function of the central administration of colleges and universities or a textbook on admissions and recruitment would suggest progress toward the resolution of the issues delineated earlier.

Implications for Practice and Further Research

We array our implications for practice by Levels One and Two of a scholarship of practice. For Level Three of the scholarship of practice, we present a recommendation for further research.

Level One. The findings of this chapter indicate that resources available for institutional leaders to engage in the scholarship of practice exist in the literature of higher education as a field of study. Given that nearly 40% of all articles published in the core journals of higher education during the past 20 years contribute to three forms of professional knowledge—replicative, applicatory, and interpretive—delineated by Eraut (1988), Level One engagement in the scholarship of practice—using research findings to develop institutional policies and guide administrative practice—stands clearly within the reach of institutional leaders. Although presidents, chief

academic officers, and chief student affairs officers who hold graduate degrees from higher education programs are very familiar with the core journals of higher education, institutional leaders who hold graduate degrees in other academic fields may be unaware of the existence of such journals and their importance as scholarly resources to guide institutional policy and practice.

The Council of Independent Colleges recently launched a new service to its membership. This service takes the form of a “Research Digest.” This digest aims to make the results of research published in the core journals of higher education available to campus leaders to enable them to engage in the scholarship of practice by using research findings to guide institutional policy and practice. We recommend that associations serving particular types of colleges and universities also create similar research dissemination efforts. Such associations include the American Association of Community and Junior Colleges, the American Association of State Colleges and Universities, the Association of American Universities, and the Association of Public and Land-grant Universities. The creation of such digests may contribute to greater uptake of research on the part of practitioners and ultimately lead to more discerning choice of topics and methodologies on the part of scholars.

Level Two. Scholars of higher education bear the primary responsibility for the generation of research pertinent to applicatory, replicative, and interpretative forms of professional knowledge. The realization of this level of the scholarship of practice depends on whether higher education as field of study values, and accords the same legitimacy to, the scholarship of practice as it does to the scholarships of application, discovery, and integration (Boyer, 1990). The academic reward structure of departments and universities that house higher education doctoral programs should place value on Level Two scholarship of practice as well as scholarship focused on Boyer’s discovery, application, and integration domains of scholarship.

Implications for Further Research Pertinent to Level Three. We offer one implication for further research pertinent to Level Three of the scholarship of practice. Although we know that almost 40% of the articles published in the three core journals of higher education in the past 20 years contribute to Level Two of the scholarship of practice—issues pertaining to the realization of Level Three remain unresolved. The development of a knowledge base for administrative practice depends on the findings of research to address the more complex and segmented issues that are inherent in Level Three. These issues include the segments of administrative practice, different roles and functions, the existence of discrete knowledge bases for each of these segments, and whether each of these discrete knowledge bases contains a range of topics critical to practice in the focal segment of administrative practice.

In closing, engagement in a scholarship of practice requires a division of labor. Practitioners need to embrace a commitment to the use of research

findings to guide institutional policy and program development. Scholars of higher education need to continue to engage in scholarship that contributes to replicative, applicatory, and interpretative forms of professional knowledge. The current and future state of U.S. higher education demands the continued guidance of research and scholarship.

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