Curriculum and Teaching Styles: Evolution of Pedagogical Patterns

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IN 1969, NOT QUITE TWO decades ago, a small volume was published by Unesco that had the simple title, *Methods of Teaching Librarianship.* In light of the fact that this essay is to address that same topic, but in the framework of a century of formal library education in the United States, it is worthwhile to consider one paragraph in the preface of the relatively recent Unesco work since it summarizes the problems faced throughout the ten decades of American library education history.

> The schools in question...are beginning to give serious thought to the quality of their teaching and are working to improve their teaching facilities (libraries, laboratories, audio-visual materials, etc.), their curricular policy and content, and the efficiency of their teaching staff; they are also trying to make the instruction they impart conform to the norms obtaining in other schools in the same country or region.[1]

The following pages will attempt to synthesize the key concepts that have dominated library school curricula with special attention to the idea of the "core," the growing conflict between library and information science, and the actual methodology of teaching as it has been described and experienced by members of the profession.

Evolution of the Curricula

As noted by Magrill in 1975, "library school curricula have been the subject of critical comment and debate for so many years now that it is

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difficult to think that there might be anything new to say on the subject."[2] In preparing this short commentary, it took only a quick review to discover that a section of relevant references could dominate any actual discussion. The period from the mid-1940s through the 1970s produced one major work after another that critiqued programs, outlined problems, and established some of the common perceptions found throughout this essay. With only one or two major dissenters—e.g., Houser and Schrader[3]—there was a reasonable consensus that historical surveys of library school curricula did identify common stages in the evolution of the course of study in library schools.

One of the most concise analyses was done by Reed in a contribution to the Conference on the Design of the Curriculum of Library Schools conducted by the University of Illinois Graduate School of Library Science in September 1970.[4] Her summary sets the stage for the current pedagogical philosophy:

> The *pre-Dui (Dewey) years*—apprenticeship and in-service library training classes...; *1887*—Dewey and his rationalization leading to a common avenue of library training...; *1923-Williamson*, the ALA Board of Education for Librarianship, and initial accreditation of professional library education; *1933*—the clarion call to respectability sounded by the 1933 standards; *1947/48*—Denver, Chicago, Columbia—all this and a master's degree too; *1951*—the unveiling of the new qualitative standards calling for sound general education, introductory professional courses, and initiation into an area of library specialization; and finally *1970*—a library education curriculum still with challenges for change impinging from every direction.[5]

In her discussion, Reed also commented on the ALA Curriculum studies conducted under the auspices of W.W. Charters, University of Chicago School of Education. The studies not only provided professionally sound textbooks but illustrated the parallel developmental patterns that library science shared with other applied disciplines; the pioneering educational and research efforts found at the Chicago Graduate Library School; the emphasis on a common core found in Leigh's Public Library Inquiry of the 1940s; and the University of Chicago 1953 conference[6] that addressed the core curriculum.

It is impossible to discuss each of these historically significant benchmarks in the evolving pedagogy of library education, but they are documented thoroughly in Vann,[7] White,[8] Carroll,[9] and most recently Morehead.[10] However, certain major concerns have been highlighted in the first century of library education.

The primary concept running through the studies indicates that library education, evolving as it did in ways similar to such other

professions as clinical psychology, public administration, education, nursing, and social work as well as the areas of medicine and law, has always focused on an integration of theory and practice. As Morehead states, "the complexity, and difficulty that inform the curricula in professional education arise from the dichotomous nature of professional work with its emphasis upon a broad theoretical foundation, and upon mastery of skills and techniques for effective practice."[11]

The original preparatory agencies were the guild and its apprentices; the battle that Dewey fought to formalize library education was against these esteemed methods, and they had to be incorporated into the course of study in order for the school to survive although there is also evidence that the coexistence of the two elements was fundamental in his beliefs and in those of his followers. At the same time, the original need to respond to demands for actual experience quickly came into conflict with the requirements of formalized training. That uneasy wedding has continued to plague the development of effective, creditable curricula. As library school programs evolved in the first half of this century, the conflict emerged even more strongly when the assorted definitions associated with the distinction between library and/or information science came into conjunction. Because of these amorphous conceptualizations, the programs of the library schools of the 1980s contain, in many instances, an unwieldy and often unsatisfactory combination of the traditional library core, appropriate library science electives, computer sciences, mathematics, philosophy, and the assorted theories of management, psychology, communications, organizational behavior, educational development, human and machine engineering, business, sociology, and any other discipline presumably of value to the generalist graduate of the one-year library school.

As already noted, this unstable situation began with the first formal programs at Columbia (Albany), and was quickly taken up by Dewey's disciples at Pratt, Drexel, Armour (Illinois), and the schools associated with public libraries. The idea of teaching library techniques or "economies" and those subjects that were perceived as particularly important in the organization of libraries, notably cataloging and classification, was matched with an equal emphasis on practical or field experience. In 1970, Reed pointed out, the "pioneer educators left their impression not only upon professional library education, but also upon librarianship generally. They attempted to give their students sufficiently specific suggestions on each of the hundreds of questions that they faced...to enable them eventually to put the library...into perfect working order."[12] The requirements of these early curricula are familiar from the well-known Williamson reports[13] and in the landmark 1936 publica-

tion on *The Curriculum in Library Schools* by Reece.[14] Williamson's studies, of course, caught the attention of the profession because they strongly documented that the quality of instruction in library schools as well as almost everything else associated with the schools was totally nonprofessional. The curricula included some twenty-five courses, but at least half of the student's time was spent in four areas: cataloging, book selection, reference work, and classification. Even then he noted that the amount of time devoted to each of the four varied greatly, and that the differences between "professional" and "clerical" demands had not been well defined. Reece[15] later described that essential distinction as the one that exists between training and education.

> "Training" may be assumed to hold in prospect routinized, repetitive tasks, and to connote the learning of methods and processes which call for little discretion and which conceivably may be exercised with only remote reference to their meaning. "Education," on the other hand, contemplates work involving problems, necessitating adaptations, embracing the revision of techniques, and entailing the treatment of human situations; it presupposes concern with a definite body of knowledge, possession of intellectual responsibility, judgment, and initiative, and appreciation of the purposes and standards of the tasks in view; in short, it implies whatever is prerequisite to practicing a profession.

Despite the strong recommendations of Williamson and the response of the profession through the Board of Education for Librarianship and the 1933 standards, the issue of theory and practice was not resolved nor has it been to this day. The schools of the 1980s have much in common with the schools of the 1890s regardless of the years of experimentation, efforts of the accrediting agencies, and attempts to provide widely held professional parameters. As Conant reported in his 1980 survey, the majority of the schools that he examined attempted a "balance" between practice and theory. Yet, he went on to state:[16]

> The tight job market in librarianship during the 1970s made it inevitable that many graduate librarians would begin their library careers in subprofessional or paraprofessional positions, and most graduate library schools provided some instruction that anticipates this situation. Thus even the theory-oriented schools were somewhat responsive to the demands of students for practical training.

These conflicting priorities are seen throughout the accredited and unaccredited programs as we move into the second century. Although no solution to this issue is currently in sight—especially in light of today's recruitment difficulties and the limited opportunity for professional employment—some members of the profession have concluded

that the one-year program is obsolete. Only through an extended period of study will it be possible to provide any serious recognition of the principles on which the field is based and to provide the quality field experience that has been recognized by other professions as part of the requirements of the first professional degree. Morehead[17] addresses this issue in detail in his chapter on "Theory and Practice in Library Education."

> It is evident that the principle thrust over the last four decades in library education has been to construct a body of theory. The writings of Danton, Metcalf, Lancour, Berelson and others show that the primary concern has been the reduction or elimination of techniques and routines that had no place in a graduate curriculum....Like trying to square the circle, the efforts to resolve the theory-technique conundrum appeared more taxing than the presumed rewards.

At the same time, he eventually concludes that the lack of past vision in resolving this pedagogical issue is not really a justification for ignoring the value of practice along with theory. Morehead also points out that some of the best responses to these issues are found in the original writings of Williamson and Reece. He then suggests that "it is to these pioneers that library educators must once again turn for direction and inspiration....An examination of alternatives to field work, within the framework of the teaching-learning process, may yet liberate library educators to seek creative responses to the legitimate demands of an experimental component in the curriculum."[18]

The Core Curriculum

At the heart of any examination of the curricula of library education is the existence of a core, a standard essence required of each graduate of an accredited program. The concept of the core was reaffirmed by the Conant report of 1980. In his review of one-year programs, he included a table titled "Composite Course Listings by Categories of Subjects."[19] Although he noted, as did Williamson in the 1920s, that none of the schools surveyed offered all of the courses [categories] that were cited, he also stated that "library schools concentrate on the basic functions of the profession: reference bibliography, technical services, and administration. The historical background of books and libraries is a standard part of the curriculum in all of the schools."[20] Conant has been criticized for his limited sample, but his conclusions about core topics were reflected in every preceding review of the field in a manner so comparable that only an occasional title wording is noticeable.

The nature of professional education, regardless of definition, has invariably suggested that there is a common content relevant to any beginning professional. In response to Williamson's severe critique in the 1920s, in 1936 Reece outlined a "brief schedule, which is essentially functional [that] illustrates the first of these steps."[21] It is not difficult to identify what Shera and others have described as "The Old Quadrivium." His list was titled "Activities Entailed in Library Work," and point number (1) was "fashioning a library collection." This was followed by (2) "organizing and caring for a library collection,..." (3) "using a library collection,..." and (4) "directing a library enterprise...." The foregoing embodies the raw material of the curriculum—in outline if not in fullness and symmetry. It may be translated into instructional subjects with whatever amplification and refinement are useful or feasible in a given case.[22]

A quarter of a century later, Reed cited the results of her survey of accredited library schools: "All of the schools studied offer courses in the areas of reference, cataloging and classification, administration, and information science; 96 percent in selection and acquisition; 86 percent in research methods; 80 percent in introduction to librarianship or library in society; and 44 percent in communications and libraries."[23] The significant addition found in Reed's survey is that of information science although the citing of research methods and content that would provide a fundamental overview of the field indicates a growing concern about elective flexibility that is seen in other writings of the last two decades. Of special importance is the already growing influence of a related, but independently evolving area of study—information science.

Supporting the need to provide the fundamental concepts and skills is the major accrediting agency itself, the Committee on Accreditation (COA) of the ALA. Although the current (1972) Standards for Accreditation are based on the premise that each school's goals and objectives determine the exact nature of the curriculum under review, COA also issues a guideline identifying the "Principles and Procedures Common to All Types of Libraries." Four basic components are listed:

1. An understanding of role of the library as an educational and information agency.
2. An understanding of the theories of collecting, building and organizing library materials for use.
3. A knowledge of information sources and an ability to assist the user of library materials in locating and interpreting desired items.
4. Knowledge of the principles of administration and organization to provide information services.[24]

These components are not identified simply as interpretation; accrediting teams examine the curriculum for the existence of the quadrivium of the past.

Despite this affirmation by the only accrediting agency dealing with first-level professional programs, members of the profession have, on many occasions, addressed the issue and proposed a variety of modifications that would reflect changing pedagogical approaches. Wilson, in 1948,[25] suggested that there had been extensive curriculum changes at, for example, Illinois, Columbia, and Chicago. He noted the relatively new approach of placing the core at an undergraduate or prerequisite level in several schools. He commented on the development of a variety of new courses focusing on the societal response required from the professional librarian.

Garrison in 1974[26] and Asheim in 1975[27] attested to a changing order. Garrison emphasizes that "serious differences of opinion have always existed on what the core is and what it should contain" and "wonders if the concept of core has not lost its validity."[28] Asheim hit on several of the interrelated issues when he first described the trend toward longer programs at the master's level.

> Interestingly enough, the move to increase the length of the program has been accompanied by a move to reduce the number of *required* courses. The "core" has undergone many changes to accommodate new content (computer technology and systems analysis, for example); to make optional some of the traditional requirements (history of books and printing, and even cataloging and classification); but most especially, the core has been reduced whenever possible, not so much to reduce the length of the program overall, as to increase the number of elective options available to the student. This recognition of the growing demand for a higher degree of concentration in a great variety of specializations is one of the key developments in library education in the past decade.[29]

Three years later, at a workshop on the Integrated Core Curriculum held at the University of North Carolina, Chapel Hill, Asheim made a slightly different statement about the emphasis on specializations. Despite apparent reduction of required courses:

> In almost all cases, there is some kind of requirement; if not a single requirement for all students, then separate requirements for all students in each specialty: a bunch of little cores. Moreover, if one looks closely at these separate cores, one usually finds two or three courses that turn up in every one of them, thus sneaking in the general core concept, *sub rosa*.[30]

The workshop then addressed the idea of an integrated core in which students move through a logical sequence of study from learning the fundamental information needed by the librarian generalist to a point at which each graduate would have a total overview of common principles and procedures. However, after hearing the reports of how selected schools were approaching that objective, Garrison concluded that the examples showed inconsistencies in defining basic knowledge, emphasis on concepts and not details, and unclear relationship to the larger information world. He identified a primary concern that would eventually impact the field more than any discussion of the core, integrated or not: "We need to agree first that there is an information profession larger than library science and that there can be professional schools of information larger than present library schools."[31]

Whither then, the core curriculum? The resolution of this issue is far from clear after one hundred years of library education. Surveys of the current situation reveal the same patterns as existed in the original schools. Only a handful of schools have attempted to define a core that might reflect the broad foundations of all branches of "the information profession." Many more evidence that even though each library school regularly reviews and "revises" its curriculum:

> Each one when it finally comes up with its (presumably unique) definition turns out to be where everyone else is: advocating the premise that anyone holding a degree from the particular school should know something about materials that carry information, the needs and interests of the users of those materials, and the means, devices, processes, and mechanisms that will bring the user and the information together. And when you shake down that general, philosophical language, you have cataloging and classification, reference and bibliography, selection of materials, and library administration.[32]

Information Science

The interjection of information science into the arena of library science education hit its major stride in the 1960s. For a number of years prior to that decade, it had been increasingly apparent that the impact of new technologies had not been assimilated effectively into library school curricula. The relatively primitive information processing equipment of the 1930s, 1940s, and 1950s was rapidly giving way to the sophistication of the modern computer; the marketplace for its users was not built on the services of the public, academic, school, or even special libraries. The attention given by librarians to the organization and retrieval of discrete, formal publications had not been redirected to

the concept of the properties, behavior, and flow of information in general. Library educators could not, however, ignore the fact that an entirely separate field of study was developing in a way that threatened the foundations of library science. Independent degree programs in information science and computer science began to cut into the available pool of students and to threaten the credibility and existence of library schools.

In 1967 Rees and Riccio noted that "the past decade has witnessed impressive efforts to define, formalize, systematize and even automate both the clerical and intellectual processes involved in library practice."[33] They described two curricula modifications that had occurred in the library schools: (1) the addition of information science courses to the schools' offerings, and (2) the development of separate degree programs. They also noted that a number of schools had established an information science track or subcurricula within the standard master's degree. It was already evident that the integration had not dealt with the basic differences in definition and that the library school courses were, in general, oriented to service and not to research. At the same time, it was commonly perceived that the future had to be built on a successful merger with redefined objectives that stressed the interdisciplinary nature of the work.

A decade later, Fosdick,[34] in his 1978 paper on trends in library education with respect to information science, cited a number of studies that confirmed the earlier predictions and illustrated the current state-of-the-art. He also presented the results of his own survey and outlined the development of library schools' curricula. Less than a decade ago, the schools were generally providing separate courses rather than an integrated curriculum. Based on his analysis, five areas of competence or topical content could be used to classify the existing courses: (1) library automation, (2) information storage and retrieval, (3) systems analysis, (4) interactive computer systems that especially focused on online bibliographic retrieval, and (5) programming.

Although Fosdick recognized that these five categories were not mutually exclusive, he was able to "fit" each course cited in the catalogs into one of the five. He also noted that a core of information science had evolved—i.e., students were counseled or required to take library automation and an introductory course in information storage and retrieval. This latter category was a broadly based one that included such topics as abstracting, indexing, vocabularies, thesauri, searching methods, information networks and systems, and study of modern storage and retrieval theory.

A few schools—e.g., UCLA—had tried to make a complete transformation in the early 1970s by focusing on what was considered to be a totally modern and relevant approach to library education of this generation:

> —the curriculum was intended to develop persons who were competent in the functional areas of the information transfer process;
> —the curriculum was intended to allow for the personalization of the process of acquiring knowledge;
> —the curriculum was intended to provide a mix of technical skills (limited in terms of classroom exposure), conceptual background, and human relations skills;
> —the curriculum was extended from twelve months to approximately twenty-one months (generally six quarters of residence plus a summer session).[35]

The designers of this program were unique in their approach despite the fact that critics considered the result to be one more example of "old wine in new bottles." The emphasis on student "personalization" meant exceptional flexibility in course selection, although, a few years later, there was a move to reestablish "required courses," and a core came into being once again. Still the UCLA program was and is an attempt to make a major break with past pedagogical patterns. A number of other programs took similar steps to create an integrated information-oriented program of study—often in an extended time frame—that would allow for student specialization at a professional level with the routines and paraprofessional responsibilities left to support staff. However, the profession as a whole did not make such a dramatic modification but moved rather to make cosmetic changes through the addition of the word *information* to the titles of their teaching units. By the early 1980s, only a handful of schools had not incorporated the word or substituted it for the historical designation of library science or librarianship. The curricula, as Fosdick demonstrated, still reflected the old tradition rather than a meaningful synthesis of the complex substance of information science with the fundamental theory and philosophy of library science. As Shera noted, "information science is not souped-up librarianship or information retrieval, nor is it antithetical to either. Rather information science contributes to the theoretical and intellectual base for the librarian's operations."[36]

At the present, a number of library schools are in the process of examining or changing their curricula to respond more adequately to the demands of the information society. Curricula of library schools have always responded to the needs of society, whether it was in service

to special groups, to its own constituency through continuing education, or at different levels of training such as undergraduate and advanced degree study. However, no societal impact has been as significant as the information revolution and the machines that have changed every aspect of our world of recorded information and communication.

Information science and computer science have grown faster separate from existing library education programs rather than in cooperation. Recent closings of nearly a dozen library schools suggest that their justification or priority in the university setting has not competed well with departments of computer science or information science. The growing numbers of undergraduate programs in information science and information resource management—to name only two areas—further threaten the future of library education. The integration of information science and the new technologies has been slow, and the next decade may well determine whether the past ten decades of library school curricula will survive into the twenty-first century.

Instructional Methods

No discussion of the pedagogy of library education is complete without addressing the question of "how" as well as "why" and "what." The concern about the method of instruction is, quite rightly, as old as the first classes in library instruction taught by Dewey at Columbia. Williamson addressed the issue in his special report of 1923 with a statement that "concerted effort should be made to raise the quality of instruction in library schools by increasing salaries and making teaching positions more attractive...."[37] His observations noted an "excessive dependence on the lecture method" which he attributed to the students' background, a failure of the emerging profession to provide adequate texts and materials, and the extraneous and demanding requirements placed on the instructional staff. Reece's study of the curriculum included a chapter on "Conditions for the Curriculum" that identified a need for adequate tools—i.e., resources and equipment.[38] The volumes of the *Journal of Education for Librarianship* have regularly noted the issue of "how to" teach the core courses, along with an occasional article on specialized areas. For example, in volumes 5 and 6, numbers 4 and 1, 1965, a series of experts outlined the assorted approaches to teaching reference, cataloging, book selection, the history of books and libraries, government publications, documentation, administration, adult education, and newer media.[39]

The 1960s were a period of special growth in the area of instructional technology and the literature began to reflect the basic tenets of

good pedagogical planning beginning with objectives, followed by planned units of instruction taught with the use of appropriate media, and concluded by a careful evaluation of the effectiveness of the instruction. A 1981 study by Kazlauskas[40] summarized many of the activities that had been incorporated in accredited schools. He noted that computer-assisted instruction had gained acceptance especially as the computer became a basic component in library and information systems. Among other forms of instruction, he described the use of programmed instruction including audiotutorials, video, online interactive laboratories, instructional games, and directed independent study. In support of these types of effective teaching approaches, in 1970 the American Library Association adopted a statement of policy on "Library Education and Manpower" that explicitly recommended that "library schools should be encouraged to experiment with new teaching methods, new learning devices, different patterns of scheduling and sequence, and other means, both traditional and nontraditional, that may increase the effectiveness of the students' educational experience."[41]

One of the best and most comprehensive discussions is Morehead's text, *Theory and Practice in Library Education,* especially his chapter on "Modes of Instruction in Library Education." He begins his review by noting that it is easier to classify modes of instruction than to discover whether one or more is superior as a method of imparting knowledge. As he simply states, "methods vary by discipline as well as by temperament of the instructor."[42] Nevertheless, he does develop a classification or taxonomy that is useful in examining the current state of library instructional methodology. He bases his categories on the research of Dubin and Taveggia[43] and begins by stating that "in a broad spectrum of pedagogical situations, there are two distinct modes of teaching-learning behavior: 'face-to-face instruction' and 'independent study'."[44]

Under the broad category of face-to-face instruction fall those areas with which many in graduate education are most familiar—notably the omnipotent lecture, the group discussion, the question-and-answer strategy that has its roots in Socrates—all methods that ultimately advocate an authoritarian role of the instructor in the classroom. The lecture or modified lecture approach is used in classrooms today as much as it has been since the first classes taught at Columbia or indeed since the Germanic tradition became the basis for the universities of this country.

Independent study, on the other hand, removes the instructor from the classroom and allows the student to choose his/her own path of

achieving the objectives of the course of study. Here, of course, the technologies of programmed instruction, computer-assisted instruction, and all of the contemporary paraphernalia that have become increasingly important, although the first use of this approach depended only on a student and an assignment to be completed—regardless of the medium. There are variations on the involvement of an instructor in that some independent study is almost completely nonsupervised while, in other forms, the instructor interjects himself/herself at significant evaluative steps along the way. It is fair to say that library school faculty employed both methods with increasing use of nonprint media as the 1960s drew to a close.

In the last quarter century, methods developed in other disciplines have been successfully adapted to library science. The case method, initiated at the Harvard Graduate School of Business Administration, moved a short distance and became a mainstay of Simmons College and then spread throughout a number of other library school programs and produced texts and resource material. The case-study approach, however, encompasses a variety of submethodologies, and it is impossible to discuss them in any detail. Some instructors found that the case study could be used in another approach—e.g., role playing. Here, in particular, the field experience within a laboratory setting could be controlled and evaluated. Use of audiovisual methods to record the interaction provided an additional strength through feedback and a means to evaluate the experience more effectively. Still another variation on the experiential approach was to require a practical "project" that required the student to relate the theory of the text to a real-life situation. Some projects were even more directed when they were confined to a laboratory situation within the library school itself and observed by the instructor. This was also seen as a justifiable approach to the practice requirement noted earlier in this discussion.

A number of commentators on the teaching methods used in library education devoted special attention to a concept called *library-centered library education.* This was probably best advocated in the landmark studies of Knapp.[45] She perceived the university library as the center of the learning experience that would incorporate the literature of the discipline, the body of knowledge of the discipline, and the sources that provide the information required by the users. The student was a participant-learner in a seminar-laboratory that would allow him/her to react, the instructor to observe and act as a mentor, and the student to respond to the incident activity. As Morehead analyzed the situation, "the unfocused problem, at first perplexing and undefined, is trans-

formed by a process of inquiry into an ordered situation....If the model works well, the process has been student-initiated and student centered, while the role of the teacher has been non-directive, in the Rogerian sense."[46]

Finally, the entire problem of quality of instruction that has plagued the profession in its first century must now be placed within the additional perspective of the requirements of information science and its effect on the methods of teaching. In its most simplistic framework, is the issue now one of adapting catalog material on OCLC terminals as it once was one of typing accurately spaced three-by-five cards? Is experience in online database searching a matter of applying theory, or of learning a special vocabulary and "how to" turn on the machine and guide its mechanics? Clearly the old issue of the inadequate and boring lecturer who made little use of instructional methodology is now more complex since the students of tomorrow's library schools are more familiar with the technology than many of the instructors. Morehead suggests that:

> [Even] if increased options for practical work through simulations or with the new technologies do not automatically confer upon the teaching-learning process a greater quality, neither does adherence to a proven set of teaching measures appreciably demonstrate a significant difference in instructional outcomes. We are not at all sure about our ability to prove statistically the main effects of any currently used educational or instructional variable.[47]

Once again, a century of experience has not brought an answer, but only suggested new and often more complicated questions.

Summary and Concluding Remarks

One hundred years of formalized library education have been completed. Library science, librarianship, library studies, or the current configuration of information and library science have emerged within the comparative framework of other "professions" of this century. In the 1960s, McConnell stated that "the professional school may legitimately expect the university to recognize that knowledge, understanding, and theoretical foundations are not enough for the professional practitioner, for he must also be a master of his craft."[48] The original problem of the proper balance between theory and practice has led to the recognition that "we tread upon a superficially familiar but highly unknown terrain which is open to exploration, with a multitude of theoretical approaches which can be taken."[49] Although the faculties of professional library education programs have seemingly placed little

priority on experiential learning, the profession itself has continued to advocate a special role for it. Shera summarized it succinctly when he stated that "every profession is a blending of theory and practice, a science and an art, *wissen und können,* to understand and to know how. Both of these elements are essential, both must be maintained in an harmonious and proper relationship."[50] As the programs evolved in these ten decades, the university setting became the accepted approach, accreditation became the measure of success, and the definition of the professional was modified with the schools in turn developing more sophisticated curricula, providing advanced courses that could lead to a doctorate, and offering lifelong-learning experiences to overcome vocational obsolescence.

One overriding issue was inextricably intertwined with the concern about the relationship between theory and practice and the definition of a professional discipline: the basic requirements known as the core. Defined by Shera, in its simplest terms, the core was "the search for a unified theory of librarianship [that] implies a professional philosophy which is expressed in the curriculum as a basic course structure required of all students."[51] Shera also noted that this issue produced a "continuing search for the principles of unity that would bind the educational program into a cohesive whole...."[52] The search for principles of unity is still a fundamental guideline to accreditation of the first professional library program—the master's-level program. Regardless, the search has not been successful, and the definition of the core has not been professionally established. Numerous experiments in many different library schools have not produced one universally accepted definition of what constitutes a core, and the problem has been exacerbated by the growing impact of information science on the traditional library science programs.

Fosdick in 1982, building on his 1977 survey, reviewed the trends in library and information science at the graduate level.[53] He concluded that "information science is now viewed as critical to modern professional education,..."and stated that "the integration of this material across the curriculum gives such traditional courses as cataloging and reference sources a different flavor than only a few years ago."[54] He also noted that more and more graduates of library science programs are seeking employment in nontraditional fields. Hayes,[55] an early pioneer in curriculum design in this area, places information science in a broad perspective that dates back nearly 140 years. Indeed, it encompasses library science rather than complementing it. To the degree that the profession does not recognize this historical depth and breadth, then to an increasing degree it will be limited in its own development and

effectiveness. McGarry, in an article that addressed the combined issues of the core and the impact of information science, concluded that "the advances in information science and technology leave us very little basis for guessing what technical skills (if any) will be needed at the end of the decade, or what will be the role and structure of these information professions that have come to the fore."[56]

Finally, the issue of the methods of teaching cannot be set aside in a discussion focused only on what is to be taught. The technological revolution has meant that the environment of the classroom has changed once and for all. Despite a historical affection for the lecture approach, the growing ease of media application and individual instruction means that the student of this decade and of the next century will be learning in ways quite different from that of 1887, 1937, and even 1987. As Morehead noted in 1980, "if library educators are not to evade pedagogical theory of this kind because it is too enervating or because it is easier to engage in mellifluous discourse upon the geegaws of technology, it is incumbent upon them to develop multiple working hypotheses to challenge and indeed disprove the assumptions."[57]

The first century is at an end and library educators are once again at a beginning. It is unfortunate that library educators too face the problem of Alice in *Through the Looking-Glass*. The Queen informed Alice that a memory should be able to go both directions. Alice responded that her memory was such that she did not recall things before they occurred, whereupon the Queen replied: "It's a poor sort of memory that only works backwards." Let us hope that we can reverse our role of only looking backwards and see more clearly the library curriculum of the future.

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