4

ACADEMIC – SCIENTIFIC CORE CURRICULUM

Frank M. Webbe and Philip D. Farber
Florida Institute of Technology
Melbourne, Florida
Glenace E. Edwall
Baylor University
Waco, Texas
and
Keith J. Edwards
Biola University
La Mirada, California

Before the advent of applied psychology and the meteoric rise of clinical psychology following World War II, the academic – scientific curriculum was essentially the entire curriculum in psychology. The prevailing university-based psychology programs defined their own curricula with substantial variation from program to program. After the rise of applied psychology, with the need for particular applied training and other attendant issues (e.g., timing of the internship and, in some states, the movement to license psychologists), the notion of a core or germ of scientific psychology came to have an accepted meaning within the discipline, although often grudgingly (see Jones, 1987, for a partial review of this period of development). The academic – scientific core of psychology came to be seen as analogous to the mathematics and physics training in the engineering disciplines. The core was the sine qua non of psychology: that which applied psychology actually applied.

The debate as to whether there is or should be a prescribed academic – scientific core curriculum continues today in both nonapplied and applied psychology. At recent meetings of the Council of Graduate Departments of Psychology (COGDOP), for example, the discussion of the possibility of implementing common core requirements across all graduate programs in psychology provoked heated debate. Nonapplied programs are much more variable in their basic curricula than are programs subject to accreditation review from the American Psychological Association (APA) or other bodies. Considerable disagreements erupted about what the academic – scientific core of psychology does or should contain and about the associated issue of institutional autonomy. In this context, it is significant that the phrase *academic – scientific core* does not appear

in the San Antonio conference resolutions, although the much less controversial phrase *knowledge base* does (see McHolland, chap. 21).

Both applied and nonapplied programs have railed against core content being delineated by accrediting bodies. Nonetheless, programs that train professionals for service delivery, particularly within the health sector and where eventual state licensing is an issue, generally accept the necessity for some consensually defined core curriculum.

Operational Academic–Scientific Core

The operational delineation of the academic–scientific core-content areas for professional training is specified in APA accreditation materials (APA, 1979) and embodied in the accumulated judgments of the Committee on Accreditation. Both now and in the past, the accreditation guidelines were created through and gain their credibility from the APA political process and the participation of esteemed psychologists in applied graduate education. Implicitly, if not explicitly, as based on their own studies of psychology, these participating psychologists determined those content areas that could be seen as core.

This operationally defined academic–scientific core includes study in biological bases of behavior, cognitive–affective bases (learning), individual differences, history and systems, social bases of behavior, and research methods and statistics (APA, 1979). Recent discussions of the scope of the accreditation process resulted in suggestions that training in ethics and professional standards, normal development, and psychological measurement be specified more directly in the academic–scientific core.

It is interesting to note that this academic–scientific core represents a mid-20th-century estimation rather than a historical appreciation of the roots of psychology. Philosophy, for example, is notably absent from this core except as covered within individual courses in the content areas. Physics, a historic contributor to psychology, also is noticeable by its absence except perhaps for the frayed remnants that remain in some areas of the biological and the learning areas. Nonetheless, APA puts forward a definition of the accreditation standards as representing an irreducible minimum of content areas beyond which groups of educators in psychology could not go without unresolvable disagreements (APA, 1982).

Academic–Scientific Core in Professional Schools Today

Rationale for the Academic–Scientific Core Curriculum in Professional Psychology

The rationale for the academic–scientific core is inherent in the interpretation of the phrase *applied psychology*. Professional psychologists apply the academic–scientific knowledge and methods of the discipline to real-world problems. The doctorate-level professional psychologist has the requisite understanding to apply nonspecific academic–scientific knowledge aptly to novel situations and to problems where manuals and textbooks are silent. This high-level ability differentiates the doctorate-level psychologist from the technician. Indeed, it has been a common observation that the critical thinking capability, developed within the framework of the academic–scientific core, is

a crucial component of training for practice (Meltzoff, 1986). As long as applied training is seen in this perspective, the academic–scientific core will maintain its importance.

Pedagogy

Professional schools differ from other psychology graduate programs and from each other in the manner in which the academic–scientific core is taught. Differences exist among traditional programs, university-based professional schools, and free-standing schools in the training of the faculty assigned to teach the academic–scientific core. In traditional programs, based in departments that train other groups of students in the scientific specialties, courses are taught by active scientists who represent narrow areas of the specialties. Although this does not guarantee that survey courses, for example, will be taught well, it should ensure that the instructors remain current with the field and have specialized knowledge of some complex concepts or studies to bring to their presentations. University-based professional schools are less likely to have such specialists on their faculties. Most free-standing schools do not have such specialists on their faculties on a full-time basis, but may have them on their adjunct staff.

Regardless of faculty training and background, most professional schools appear to rely generally on the lecture method. Less frequently, laboratory courses in physiological processes, perceptual processes, animal behavior, or child development are offered. Professional psychologists, rather than active scientists in the field of study, often provide the instruction. The implications of this type of instruction for adequacy of learning have never been considered fully.

The traditional department model of active scientist-as-teacher incorporates the student-as-apprentice in the laboratory. At its best, it is characterized by excellent one-on-one training, but it is very inefficient in terms of the numbers of students who can be trained adequately within the model. In professional schools, the training model differs from the traditional department model. Students in academic–scientific core courses are trained didactically, often without hands-on experience. Knowledge and attitudes, rather than laboratory and research skills, are seen as the desirable end product of training. This type of instruction has been characteristic of professional schools for some time and is part of the identity of professional school training (Kopplin, 1986).

In training for applied practice, professional schools assume that graduates usually will not become researchers in one of the traditional scientific areas of psychology. A typical professional school goal was to train students only at the basic level of research skills and to focus more explicitly on fostering the attitude of respect for the scientific basis of the discipline and the understanding that allows them to be knowledgeable consumers of scientific information. Recently, Trierweiler and Stricker (see chap. 14) developed a much more sophisticated view of the professional psychologist as local clinical scientist. In their view, the overarching goal of much of academic–scientific core training is to develop:

> *critical investigators of local (as opposed to universal) realities (a) who are knowledgeable of research, scholarship, personal experience, and scientific methodology; and (b) who are able to develop plausible, communicable formulations for understanding essentially local phenomena using theory, general world knowledge including scientific research, and, most important, their own abilities as skeptical scientific observers. (p. 104, chap. 14)*

Toward this end, students are prepared with a firm foundation on which to build ad-

ditional research skills, but further training is dictated by individual choice rather than program requirement. The training model and philosophy dictate the depth of the content in methodology courses and in the academic–scientific core.

Revision of the Academic–Scientific Core Curriculum

General Considerations

Any revision of the content labeled *core* can be expected to provoke considerable debate. Revisionists have two responsibilities: (a) to consider if each area that is currently included in the academic–scientific core is still crucial, and (b) to consider what, if any, new areas should be added.

In this context, one approach begins by reviewing how the academic–scientific core came into existence. A need for consistency in the training of those licensed for practice was a major driving force behind the creation of the APA accreditation office and, by extension, the construction of the academic–scientific core curriculum. The next step is to think about the extent to which the present academic–scientific core is being driven by the existing accreditation guidelines and by the continuously changing state licensing requirements as determined by the state psychology boards. A further consideration is whether these operational determiners still mirror a rational basis for the knowledge areas that are seen as crucial to applied education and practice.

There are many illustrations of emerging knowledge areas that may be considered for inclusion in the academic–scientific core. Many state boards, for example, are requiring psychologists to become knowledgeable about the myriad ways that acquired immunodeficiency syndrome (AIDS) affects psychological practice. Should AIDS-related content be included as part of the academic–scientific core? Similarly, a proposal has been put forth to include psychologists within the small group of professionals who may prescribe drugs. Should pharmacology be included in the core? Race, culture, and ethnicity are considered to be crucial in the application of psychological knowledge for therapeutic benefit. Should cultural anthropology or sociology be included as a necessary part of the core? Because religion is so often a key to the understanding of the behavior both of individuals and of groups, should religious studies form part of the core?

In the sections that follow, we propose two models or conceptualizations for revising the academic–scientific core curriculum in a responsible and responsive manner. They may be undertaken either separately or in concert.

Model 1: The Static and Dynamic Elements of the Core

On the one hand, the entity that we call psychology and that we abstract in the academic–scientific core cannot be so changeable that its identity is altered each time a new and important topic is identified. On the other hand, the academic–scientific core cannot be so fixed that it precludes change. Therefore, to ensure both continuity and the capacity for change, the academic–scientific core could comprise explicitly static and dynamic components.

In this model, the static component would not be completely static, but it would have greater inertia than the dynamic component. For example, the static component would consist of the relatively well-accepted areas that constitute the current academic–

scientific core described by the APA accreditation model. The academic–scientific core would be reviewed and evaluated either on an ad hoc basis (e.g., when sufficient dissatisfaction with the existing version reached a crescendo that could not be ignored) or on a structured schedule (e.g., every 5 years). Change would come slowly, only after much deliberation, as befits a construct as important as the core.

The dynamic component would consist of newly identified or developed areas where knowledge is very relevant to practice, such as those previously mentioned (i.e., AIDS, pharmacology, multicultural diversity, and religion). These areas would be included within the relevant content areas of the static component.

The identification of a dynamic component of the academic–scientific core would foster an agreeable attitude toward change. By providing a conceptual mechanism for change, some of the more unpleasant side effects of the current unstructured process for determining change might be eliminated. Specification of the content to be changed would be obtained through a feedback process from psychologists in practice; from state boards of psychology; and from researchers and educators in professional schools, in departments of psychology, and in other disciplines.

The dynamic component of the academic–scientific core could be seen as the precursor to change in the static component. The longer a content area is held within the dynamic portion, the more likely that it should become part of the static portion. As an illustration, issues of multicultural diversity, long included within the social bases of behavior, might become a separate content area in a modification of the static component.

Model 2: Integrating the Academic-Scientific and Professional Cores

A second approach to revision of the academic–scientific core is to integrate it with the professional core. As Peterson suggested, "The practice—the real needs of psychologists and clients in the world outside universities—appropriately demands a particular kind of relevant and useful scientific psychology" (p. 33, chap. 3). The point here is that the psychology of the 1990s is not one where there is simply a basic science and applications of it. There is also a strong and vigorous applied science of psychology. It follows that the essential elements of the academic–scientific core and the professional core could be taught in an integrated manner.

According to an integrative approach, each course in the academic–scientific core should communicate core professional relevance and vice versa. For example, in a clinical training program, the core course in biological bases of behavior should integrate elements of practice that demand understanding in biological terms. These might include eating disorders, sexual dysfunction, gender issues, and assessment of developmental disabilities. An interesting implication of such an integration is that the most qualified person to teach the restructured course may not be the laboratory scientist or the practicing professional psychologist. Rather, some retraining of either one might be necessary to accomplish the task. We would not expect the practicing professional to have engaged actively in experiments that led to current scientific advances, and we would not expect the active scientist to be experienced in the intricacies of applied practice.

As Derner and Stricker (1986) suggested, faculty in professional school roles are more subject to curricular demands and programmatic needs than the faculty in traditional university departments. Integrating the academic–scientific core and the applied core may place an additional demand on the professional school faculty. An alternative might be to develop a team-teaching approach characterized by an active scientist in tan-

dem with an active practitioner. Although the staffing patterns of many professional schools do not lend themselves to this option, nonetheless this alternative offers great flexibility in implementing an integrative curriculum.

Integrating the academic – scientific with the applied core might be accomplished best incrementally, one professor at a time or one content area at a time. Otherwise, the entire curriculum may become so fluid that it will confuse rather than educate.

One major implication of this integration would be a move toward a curricular model that is much more content oriented than course oriented. One of the inherent drawbacks of a curriculum that is designed to satisfy accreditation guidelines and the insistence of licensing boards that a particular topic be addressed in training is that programs equate content with course. Generally, separate courses, whose titles mirror the topics judged to be important, are developed. For example, we now teach a separate course in ethics even though ethical content permeates practicum training and some didactic courses. Most curricula include a specific course in history and systems even though historical content is included in most academic – scientific core courses.

If training programs move toward an integrative model, whether alone or in concert with the static and dynamic components model, then a content-oriented, competency-based curriculum may emerge. If and when this happens, training programs and state boards must communicate better and must cooperate more in the licensing procedure so that graduates are not affected adversely. Already state boards may determine that a student who completed an APA-accredited program must take additional course work to be eligible to sit for licensure. Lack of communication and cooperation between programs and state boards would be detrimental to programs and their graduates.

Preparation for Current and Future Practice

It is our responsibility to prepare our students both for the world that they will encounter soon after graduation and for the world of the future. To accomplish this we must be able to translate our vision of future issues into the dynamism that is built into the curriculum. The issues relating to the static and dynamic portions of the academic – scientific core curriculum have an important relation to this preparation. Programs cannot rely only on the static component of the academic – scientific core to provide the underpinnings for future practice. For example, at present we can predict that the AIDS epidemic will extend into the future. How have training programs responded to this immense problem? On the basis of a brief review of course offerings and discussions with faculty at many of the National Council of Schools of Professional Psychology institutions, only a small number have responded programmatically to this issue. Clear acknowledgment of a changeable, dynamic component of the curriculum could facilitate our response to predicted demands of future practice and might foster a proactive approach toward the identification of such demands.