A MODEL CURRICULUM
FOR A DOCTOR OF PSYCHOLOGY (PSY.D.) PROGRAMME

a report
to the Board of Directors
of the Canadian Psychological Association

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Abstract

A model curriculum for Psy.D. training in clinical psychology is outlined. General guidelines for specific academic course material, practicum and internship experiences, and research exercises are provided, as well as a possible sequence of program components. Guiding principles were core competencies (MRA, 2001) and the CPA accreditation standards (CPA, 2002).

The model curriculum was prepared at the request of the CPA Board of Directors. Documents commenting on competencies, knowledge, skills, core content and training for the Psy.D., for the doctoral degree in psychology, and for professional psychology, from both Canadian and U.S. sources, were reviewed.

The authors suggest that the principal substantive difference between the Ph.D. and Psy.D. curriculum is in research training, through which the Psy.D. candidate learns to address problems associated with the practice of psychology, using an appropriate strategy of disciplined inquiry, whereas the Ph.D. candidate learns to produce original, generalisable research relevant to clinical psychology. Both models of training require similar competency in research knowledge bases. The authors also suggest that the other skills, knowledge bases, and competencies demonstrated by the Psy.D. and the Ph.D. clinical psychologist should be similar, and, therefore, that the two models require similar curricula.

The proposed model curriculum, designed to follow an honours Bachelors degree in psychology, requires a minimum of four years of study, involving at least seven terms of formal course work, at minimum a 600-hour practicum, at least two terms devoted to a research exercise, and at minimum a 1600-hour internship.

Preamble

The training program leading to the Doctor of Psychology (Psy. D) in Clinical Psychology has a primarily applied, professional, practitioner focus. Its primary objective is to prepare doctoral-level professional psychologists to actively engage in, develop, supervise and evaluate high quality mental health services for clients requiring clinical intervention. Through coursework, extensive field training, and applied research experience, the goal is to prepare highly skilled generalists in the professional practice of psychology to resolve practical psychological and health-related issues in light of the most recent scientific developments in psychology, and to serve the respective communities in which they are employed. Courses stress the importance of critical thinking in the discipline of psychology, and the curriculum provides a breadth of knowledge regarding scientific psychology. Since this is a professional degree, clinical education and application of scientific knowledge to clinical domains are stressed throughout the curriculum, as well as in the clinical practica/internships. Graduates typically work in applied, service-oriented positions where they work directly with clients, as well as supervise and train other professionals.

Background and Purpose

In 1997 the Board of Directors of the Canadian Psychological Association (CPA) established a Task Force on the Psy.D. degree. The CPA Board of Directors received the Task Force report (CPA, 1998) and unanimously approved its recommendations in November 1998. The recommendations were as follows:

a) CPA continue to advocate for the doctorate as the national standard for education and training in professional psychology.

b) CPA endorse both the scientist-practitioner and the scholar-practitioner model, as articulated, for doctoral training in professional psychology.

c) CPA support university-based training programmes in their attempt to develop examples of doctoral programmes in the scholar-practitioner model described and assist in the exploration of appropriate practica and internship resources.

d) CPA support regulatory boards as they may attempt to establish/re-establish the entry requirement for independent practice at the doctoral level.

e) CPA change the current acknowledgement within the CPA Accreditation Criteria of the possible emergence of Psy.D. programmes to include the scholar-practitioner model, as articulated, within the criteria. CPA assure that the Criteria encompass the

relevant Psy.D. programme guidelines and content as contained in (the Task Force) report.

f) CPA thereafter inform all Psychology constituencies, including universities and provincial bodies, of the expanded accreditation guidelines for both scientist-practitioner (Ph.D. and scholar-practitioner (Psy.D.) programmes.

The Task Force also advised CPA to continue to accredit only doctoral programmes which are university-based and to support the development of scholar-practitioner (Psy.D.) programmes, as described, in collaboration with psychology associations, regulatory bodies and interested universities.

The Psy.D. Task Force report described the essential features of a Psy.D. training programme in considerable detail, including articulating the knowledge domains, as well as the science and practice competencies that should be addressed by such a programme.

At its April 2001 meeting, the CPA Board of Directors asked the first and second author of this paper to further articulate the material in the Task Force report by developing a model curriculum for a Psy.D. training programme in clinical psychology. The purpose of this exercise was not to be prescriptive but rather to add information, stimulate discussion, and provide assistance to an area of increasing focus by both university faculty and practitioners in Canada (Collins, 2001; Gauthier, 2001; Hurley, 2001; Ogloff, 2001). A draft report, submitted to the Board in June, 2001, was referred to the Education and Training Committee for further revision. This revised report was prepared by the two additional authors in consultation with the original authors, and submitted to the Education and Training Committee for comments.

Overview and Guiding Principles

The following principles are central in the training of psychologists for professional practice:

1. Education and training for practice is grounded in the evolving knowledge base derived from the scientific discipline of psychology.

2. It is the responsibility of all programmes that prepare providers of psychological services to ensure that graduates are fully aware of the theoretical paradigms, empirical foundations, and scientific issues related to the assessment and treatment interventions that they employ.

3. It is equally important that graduates achieve entry level proficiency in the delivery of professional services (Joint Council on Professional Education in Psychology, 1990).

4. Doctoral programmes that prepare psychologists for practice should meet accreditation standards for professional training (CPA,2002) and core regulatory requirements for licensing/certification (MRA, 2002).

Core components of Psy.D. training programs include:

5. A research experience resulting in a dissertation on a meaningful problem associated with the practice of psychology, using a strategy of disciplined inquiry appropriate to the problem (JCPEP, 1990).

6. A minimum of three full-time academic years of graduate study or equivalent, and completion of an internship prior to awarding the doctoral degree.

7. Doctoral programmes that prepare psychologists for practice should be held by accreditation and regulatory guidelines (CPA,2002; MRA 2001) to a common set of core curriculum requirements. Over and beyond these, programmes should be free to augment or to supplement students' preparation in their own fashion.

The term curriculum can be construed in both a broad and a narrow sense. The narrow sense is a list of academic courses and requirements that constitute degree requirements. The broad definition of curriculum includes all competencies, knowledge bases, skills, values, and training imparted as part of an academic programme. The term curriculum is used here in this latter, broadly defined sense. We take cognisance of the fact that there are many ways to deliver information, impart values, and shape attitudes in a curriculum in addition to formal academic course work. Practica and internship experiences, research exercises, independent study, comprehensive formative evaluations, and less formal didactic interaction between student and teacher outside of the classroom are examples of additional pedagogical methods.

The curriculum domains outlined in the present document are for the most part identical to those expected in a PhD. Programme in professional psychology. Only the nature of research experience are particular to the Psy.D. model.

As outlined in the CPA Accreditation Standards, the curriculum content needs to be thoughtfully sequenced and integrated to foster students' development of a professional role and professional identity consistent with the specific goals and objectives of each programme. It is understood that the range, emphasis, and specific content of courses and experiences offered within a given department is

ultimately the product of deliberation among faculty members, department chairs, and deans.

In the present document, the competency domains to be included in a doctoral scholar-practitioner training programme are outlined. One possible model for imparting this competence is presented, including possible courses, duration and practica. As in the Task Force Report, particular attention is given to the specific research training appropriate to the Psy.D. model. Specific attention is also given to how the program could be adapted to meet the needs of those seeking training at mid-career.

Methodology

Reports of Canadian bodies, in addition to the Psy.D. Task Force (1998), that have addressed the issue of competencies, knowledge domains, training and skills sets for professional psychology were reviewed. These include the Mississauga Conference on Professional Psychology (CPA, 1995), the Mutual Recognition Agreement prepared for representatives of Canadian regulatory bodies (MRA, 2001), and the CPA Accreditation Standards and Procedures (CPA, 2002).

> The Mississauga Conference on Professional Psychology (CPA, 1995) did not articulate competencies but did comment specifically in two instances on skills and training.
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> Representatives of all Canadian regulatory bodies discussed competencies in relation to mobility for psychology under the Agreement on Internal Trade (AIT) (Regulators' Meeting, 2000, 2001). The Appendix to the Mutual Recognition Agreement (MRA, 2001) lists these competencies, with definitions and two sub-categories, knowledge and skills, for each competency. Edwards (2000) points out that the list was not intended as a comprehensive template for the training of professional psychologists but was rather intended to articulate areas in which registered psychologists in Canada must demonstrate an appropriate level of professional competency.
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> The current CPA Accreditation Standards and Procedures allow for doctoral training according to both the Ph.D. and Psy.D. models (CPA, 2002). The standards and procedures do not refer to competencies but do specify core content areas, skills and training requirements.

Of the documents used for guidance here, only the CPA Task Force (1998) commented directly on Psy.D. training The Mississauga Conference statements (CPA, 1995), the CPA Accreditation Standards (CPA, 2002) and the Mutual

Recognition Agreement, 2001) are all descriptive of a *doctoral* degree in professional psychology, with no reference made to Ph.D.-Psy.D. distinctions.

The various competencies, knowledge bases, and skills identified in the Canadian documents are outlined in Appendix I. If one considers each of the four documents in its entirety, with attention focussed on overall content rather than on terminology and classification, there are no obvious inherent contradictions or incompatibilities among them. In addition to these Canadian documents, material from the United States was reviewed in order to provide a broad contextual and developmental perspective.

In the proposed curriculum, the various competencies, knowledge, skills, and accreditation standards identified in the earlier documents are grouped into curriculum domains. For the interested reader, the relationship of the domains to the competencies, knowledge bases, skills and standards of the major four documents reviewed is detailed in Appendix II.

Given the specific mandate to develop a model Psy.D. curriculum by further articulation of the CPA Psy.D. Task Force report (CPA, 1998), which alone commented specifically on Psy.D. training, that report forms the basis for the following model. Because the CPA Accreditation Standards (CPA, 2002) are recognized nationally as the standards to be met by all Canadian professional psychology training programmes, the potential to meet those standards as well as core regulatory competencies (MRA, 2001) were important considerations.

A model curriculum in the broad sense is outlined. In the proposed curriculum, where appropriate, domains are grouped and sequenced into curriculum components typical of accredited doctoral programs in North America. These components are sequenced in accordance with the aim of the accreditation standards of integrating practice, theory, and research early in the program (Standard III A) by requirements which are appropriately sequenced, cumulative, and increasingly complex (Standard II H).

Competencies, Knowledge Bases and Skills Within the Psy.D. in Comparison to the Ph.D. Model

In its report to the CPA (1998), the Psy.D. Task Force developed cogent and balanced arguments with regard to the reasons for endorsing the inclusion of the Psy.D. training model in psychology. These are not repeated here. The Task Force stated that one of the principles that guided its work was that the scholar-practitioner (Psy.D.) model was seen as parallel and complementary to the scientist-practitioner (Ph.D.) model, the strengths of which were reaffirmed by the Task Force. We concur with this principle.

One of the more obvious differences, if not arguably the most obvious, between the Ph.D. and Psy.D. models is the nature and role that research plays, initially in training and, later, in practice. Whereas Ph.D. research training may include conducting either basic or applied research, Psy.D. training focuses clearly and explicitly on conducting applied research. The nature of such differences in emphasis are articulated more fully below. Other possible differences in the training needs and outcomes of the two training models were considered.

Irrespective of training model, Psy.D. or Ph.D., professional psychologists need to be competent in the areas of interpersonal relationships, assessment, intervention or ethics or in any other professional competency under consideration. Little difference in the basic components of the two models of doctoral training could be identified, other than in the type of research conducted to fulfil the research requirement, and expected in career. This does not mean that the advanced knowledge content (as opposed to a knowledge base) would necessarily be exactly the same in both models. The Ph.D. candidate might wish to take advanced courses, for example, in statistical techniques or cardiovascular psychophysiology, while the Psy.D. candidate might be desirous of advanced study in a particular psychotherapeutic method or assessment application. While opportunities for specialised advanced study need to be available for students in both models, no difference in the core skills, the core knowledge bases and the core competencies demonstrated by the Psy.D. clinical psychologist and the Ph.D. clinical psychologist, are seen. Thus, the two models require similar curricula.

In short, the two training models are more similar than they are different. Training in both models should result in competency as a professional psychologist. Whereas advanced training may diverge, exposure to knowledge bases should be the same for both, as should exposure to skill development, other than in the research requirement.

The Role and Nature of Research in Psy.D. Training

One of the more obvious differences, if not arguably the most obvious, between the Ph.D. and Psy.D. models is the nature and role that research plays, initially in training and, later, in practice. Though Psy. D. training is professional doctoral education focussed on the practice of psychology, applied research is an important component. Whereas Ph.D. training, however, focuses on the production of original, generalisable knowledge through basic or applied research, Psy.D. training focuses particularly on research knowledge and skills in the solution of applied problems.

There is a low probability that a psychologist with Psy.D. training will take on a professional role primarily as a producer of original, generalisable research knowledge. The Psy.D. Task Force (CPA, 1998), cited the survey results of

Hunsley and Lefebvre (1990) showing that, for most clinical psychologists in Canada, the production of such research is neither part of their job mandate nor their career preference. AIthough active research is becoming more and more valued in health-service settings, it is assumed that most psychologists with Psy.D. training and, indeed, most applied psychologists, will primarily be consumers rather than producers of original research knowledge. While many applied psychologists may not conduct broadly generalisable research, they should use research to inform their practice. Generalisable research should be the basis on which practitioners make choices with regard to the effective and ethical use of treatment and assessment interventions. Such research should be the basis on which practitioners inform the public about psychological knowledge, whether it be directly to clients, through the media or, in the role of expert witness, to the courts.

Effective and ethical practice requires more than a passive reading of reports of original research, even if the research is published in peer-reviewed journals. An informed practitioner must be able to distil best practices from research literature. When reading research reports, the practitioner must be able to make judgements with regard to issues such as adequacy of sampling, adequacy of measurement devices employed, use of appropriate data analysis techniques, the nature of inferences made on the basis of data analysis, and the generalisability of findings from the research sample used by the scientist to the clinical population served by the practitioner.

In addition, it is important, as emphasised in the Task Force Report, that the skilled practitioner-scholar also be capable of contributing to the solution of a local problem through applied research, as epitomized in designing and/or empirically evaluating the effectiveness of a locally developed or adapted assessment or intervention tool, empirically evaluating the implementation of an empirically valid intervention program disseminated to the local setting, or empirically evaluating the effectiveness of an intervention with a particular client. These skills epitomize the unique applied research contributions of clinical psychologists.

These differences in career and research goals of Scientist-practitioner (Ph.D.) and Scholar-practitioner (Psy.D.) programs entail differences both in the research experiences appropriate to each program, and in the research philosophy and methods emphasised in the preparation for such experiences. Ph.D. research training encompasses both applied and basic research, the latter of which is focused on the development of universal knowledge, as assessed by the discovery of statistically significant relationships or effects under controlled circumstances. Psy.D. research training, on the other hand, is focused on understanding and/or addressing applied problems through the critical analysis of the research literature or discovery of practically significant relations or effects, most often studied in the natural environment.

These considerations with regard to experiential training in research led us to the question of the differences between the Psy.D. and the Ph.D. research training. If the Psy.D. scholar-consumer is to be an informed, effective, ethical practitioner, his or her understanding of basic research methodology and data analysis needs to be virtually the same as that of the Ph.D., the scientist-producer. For the experiential component, however, the Ph.D. candidate is required to design and conduct a doctoral research thesis that is original and contributes to the advancement of scientific knowledge, while the Psy.D. candidate should be required to engage in a doctoral research exercise (a dissertation or the equivalent to be determined by the training program) in which he or she will demonstrate ability to follow a "systematic mode of inquiry involving problem identification and the acquisition, organization, and interpretation of information pertaining to psychological phenomena".

Thus, the skills involved in conducting research will differ for the Psy.D. and Ph.D. candidates. More detail is given below under experiential components.

There is a second consideration, which focuses on attitudinal or cognitive style. Trierweiler and Stricker (1992) and Peterson, *et al.*, (1997) proposed the concept of the local clinical scientist as an outcome of professional psychology training. They define local clinical scientists as:

> 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 sceptical scientific observers.

The local clinical scientist would apply such skills not only in evaluating and conducting research but also in clinical work. Peterson, *et al.* (1997) suggest that the local clinical scientist should be guided by two questions, i.e., How do you know? and Does it apply? While there are undoubtedly a variety of methods that might and should be used to encourage such a questioning, observational focus, providing a solid grounding for the professional psychologist in research competency is clearly a primary one.

While we see a difference in skill development in that the Ph.D. candidate conducts a piece of original research while the Psy.D. candidate will demonstrate research skills by engaging in a research exercise involving criticism and evaluation of existing research and/or applied evaluation of clinical interventions or programmes, it is our opinion that the competency in research as defined by knowledge bases should be the same in both models.

Curriculum Components for Psy.D. Training

The identified curriculum domains and associated content areas are outlined for the most part in order of their mention in the CPA Accreditation Standards (2002), to facilitate newly developed Psy.D. programmes in seeking accreditation from CPA. The earlier listed content areas are often offered earlier in the student's programme.

A. Entry Requirements

Programmes should ensure that candidates have demonstrated analytic skills at the undergraduate level to prepare them adequately for graduate study in psychology. Typically for programs in Canada, this requires an honours undergraduate degree or equivalent in psychology.

B. Core Content Areas

Programme faculty must ensure that education and training in professional psychology is based upon the evolving academic-scientific body of knowledge in psychology. Faculty should require acquisition of knowledge of:

a) biological bases of behaviour (e.g., physiological psychology, comparative psychology, neuropsychology, psychopharmacology);
b) cognitive-affective bases of behaviour (e.g., learning, memory, perception, cognition, thinking, motivation, emotion);
c) social bases of behaviour (e.g., social psychology, group and family processes, sexual orientation, organizational and systems theory, gender differences);
d) individual bases of behaviour (e.g., cultural and ethnic group differences, bicultural processes, generational differences within immigrant populations, developmental psychology (child, adolescent, aging, lifespan), theories of personality)
e) history and systems of psychology

It is noted that, in keeping with the Canadian emphasis on the undergraduate honours degree, which includes specialized training in each of the core areas, the CPA Accreditation standards (2002) hold that competence in these areas may be demonstrated either by passing suitable examinations in each area at the graduate level or by successfully completing at least one half-year graduate course or two terms of senior undergraduate coursework in each area. The authors recommend that the core Psy.D. curriculum require competence in three of these areas as a prerequisite for admission, or that the time to demonstrate this competence be added to the typical program duration on an individual student basis. To ensure graduate-level competence in these core areas, as well

as identification with the discipline of psychology as a whole, two or more areas should be covered in the graduate curriculum.

C. Assessment and Intervention

Current standards require particular attention to training for competence in the following at the graduate level:

- dysfunctional behaviour or psychopathology, diagnosis
- psychological assessment[2],
- empirically-supported intervention[2],
- consultation[2],
- clinical supervision[2]

A one-term graduate course in psychopathology is typical.

Assessment includes selecting and applying various assessment methods to describe, conceptualize and characterize professional decisions and services. The primary purpose of assessment is to provide an understanding that informs a practical plan of action rather than producing a diagnostic classification as an end in itself. Courses may also incorporate instruction in test construction and psychological measurement (see below), which typically then span at least two terms.

Intervention includes activities that promote positive client development or change, and necessitates a basic understanding of biomedical technology, psychopharmacology and prevention science. Because standards require that all programmes include training for competence in more than one therapeutic modality, at least three courses focussing on intervention are typically required. These should also incorporate material pertaining to competence in:

- interpersonal knowledge and skills in professional practice[2],
- theories and methods of psychotherapy, and
- couples, families, and groups, as well as individuals[2]

It may be appropriate to embed didactic material on consultation (consultation process and methods) and clinical supervision as modules in other courses in the curriculum, as opposed to as full-term courses. Practical experience and assessment of skills in these areas is suggested to be most appropriately provided primarily in the context of practicum and internship training. With respect to supervision of more junior professionals, such experience is most appropriate later in a training programme.

The current standards also require that programmes provide students with didactic instruction and practical experience promoting competence with human diversity as it affects and is affected by psychological phenomena and professional practice. Material pertaining to diversity can either be offered as a

required course, or systematically embedded in required courses throughout the curriculum.

Competence in the above content areas require instruction and assessment of skills as well as knowledge. Thus, along with didactic classroom instruction in the above areas as well as in Ethics (see below), practical instruction and experience in these areas is typically provided in assessment and therapy practicum courses (minimum 600 hours).

D. Core Method Areas:

It is imperative that throughout their training program students come to appreciate the reciprocal influence of science and practice. "A sophisticated level of research competence is expected of all (Psy.D.) graduates.... Research competence enables graduates to distinguish fact from opinion in their applications of the science of psychology. It also promotes readiness to contribute to innovation in existing theory and technique." Students must achieve a level of research competence "that enables them to be aware of the theoretical paradigms, empirical bases and research issues related to the assessment and treatment interventions they employ (JCPEP, 1991, p. 7) ".

Method competencies include:

Professional ethics, standards and legislation [1]
Test construction and psychological measurement theory
Statistics
Research methodology in clinical psychology (qualitative and/or quantitative)
Programme development and evaluation[2]
Practice Management Skills [2]

A one-term ethics course is typical. As noted above, test construction and measurement theory may be incorporated into didactic courses in assessment.

The organization of the research methodology and program development components is the area most challenging and least developed for Psy.D. training programs. The professional practitioner training model includes a strong emphasis on applied research. The research sequence should be structured as an integrated series of methodological seminars for practitioners. Building upon prior coursework in experimental psychology, introductory and intermediate statistics and psychometrics, candidates should achieve competence in more advanced strategies for conceptualizing applied research problems, designing appropriate strategies for data collection and using appropriate methods to analyze and interpret results. Course content should emphasize data-based

[1] Noted as particularly suitable to practitioner instruction or co-instruction, see second section following

approaches to solving the applied problems that psychologists are likely to face in their professional roles, such as critically synthesizing and analysing research literature, evaluating clinical outcomes, conducting needs assessments, validating clinical assessment tools, and developing and evaluating clinical programs. Four courses in statistics and research methods might be envisaged.

Programmes will need to give considerable thought to the practice management knowledge and skill necessary for effective professional leadership in the context of the Canadian system of healthcare delivery.

E. Specific Experiential Components

Research Experience (at least 2 terms full-time or equivalent)

Teaching (teaching and supervision skills and technology of knowledge dissemination)

Internship (minimum 1600 hours)

Each candidate should conduct a doctoral research project supervised by a research chair and doctoral committee knowledgeable in applied research. The Psy.D. dissertation is conceptualized as feasibly carried out in a two-term full-time research sequence. The preparatory skill learning and conceptual planning, however, should be initiated early and integrated continuously throughout the program. The dissertation should demonstrate competence critical thinking, creative integration, and scholarly communication relevant to professional issues and practice in psychology. Such a dissertation should demonstrate the implications of the science of psychology for the practice of psychology. This dissertation should be a contribution to professional psychology, for example, potentially publishable in a professional journal. The dissertation may fall within one of several broad categories and is generally from an applied research basis. Some examples include:

a) Program Evaluation: psychological consultation to a clinical program or evaluation of a clinical tool, including relevant literature review, empirical needs assessment, results and recommendations.

b) Critical Literature Analysis: literature review and significant synthesis, modification, reformulation, or advance in an area relevant to the practice of psychology.

c) Clinical program or Instrument Development: relevant literature review, development of a product or program, including support documentation, and empirical implementation or evaluation of at least a portion of the application.

d) Qualitative Research: relevant literature review, qualitative research methodology (archival or new data), results, and discussion of the findings in an area of clinical psychology.

Some of the above examples (e.g., a) and d)) would also fulfill the requirements of a Ph.D. thesis. Dissertations may also involve quantitative research on archival or new data. However, in contrast to the Ph.D. thesis, a clinical dissertation should not require extensive data collection, and in the current proposal is designed to be feasibly completed in 8-12 months of full-time work. In order to achieve high quality research competence in such a short-time, it is important that students benefit from the attentive mentoring of a skilled applied researcher and be provided with the opportunity of carrying out their research within or closely affiliated with an ongoing clinic research program.

The nature and goals of practicum and internship training are specified in more detail in the Accreditations Standards (CPA, 2002).

F. Evaluation

Each programme faculty should provide appropriate evaluation mechanisms for ensuring that its graduates acquire the core competencies articulated above. The evaluation of such broad competencies as critical thinking, integration, and professional judgement is both central and challenging.

In addition to grades in coursework, summative and formative evaluation tools might include: written and/or oral comprehensive examinations to assess breadth in clinical content areas, a written dissertation proposal, oral defenses of dissertation proposal and dissertation, case presentation, and written and/or oral clinical competency exam. Such tools should be employed formatively and sequentially with set time-points to encourage appropriately sequenced and timely progress through the program. For example, successful completion of the dissertation proposal defense might be a prerequisite for the second research term, committee approval of the written proposal might be required prior to the proposal defense, passing the clinical competency exam might be prerequisite to applying for internship.

Is a degree other than the Ph.D. required for this new model?

As noted above, the Psy.D. Task Force (CPA, 1998) developed cogent and balanced arguments with regard to the reasons for the emergence of the Psy.D. training model in psychology. One main reason is that the emphasis on the production of original, generalisable research in the scientist-practitioner model fits neither with the needs of the applied settings in which the majority of professional psychologists work, nor with the interests of the majority of students seeking doctoral level training. The applied settings need expertly trained

practitioners capable of selecting, designing and evaluating interventions and intervention programs in those settings. Another cogent reason is that the knowledge base in psychology has grown to the extent that it is no longer feasible for all doctoral programs to train all students to achieve the necessary excellence in both science and practice, including the ability to evaluate practice implementation. There is an increasing need to tailor training more to the needs of one or the other professional career modality. For reasons clearly articulated in the Task Force Report (1998), practitioner-scholar training carried out only in university-based psychology programmes is endorsed.

Nevertheless, many professional Ph.D. programs currently offer a wide range of thesis research options to students, from basic scientific to applied focus. Ph.D. programs also vary widely in the relative emphasis placed on research and practice Given these considerations, some have queried whether a new degree is required, suggesting that the Ph.D. degree research requirements are flexible and broad enough to encompass the practitioner-scholar focus. In the opinion of the present authors, the professional education focus, applied research training, and time-limited research experience focussed on local application rather than contribution to new generalisable knowledge, outlined in the present document, merit a separate Psy.D. degree.

The issue of degree nomenclature should be debated by each programme and institution, however, following a clear articulation of the nature and breadth of the particular model of training espoused. As noted in the CPA accreditation principles, within the university context, it is the prerogative of each training program and institution to define and justify its mission, goals and objectives, and the means to attain these. The Psy. D. degree is proposed for adoption by those institutions and programs that choose to emphasise the practitioner-scholar (local scientist) professional training. Awarding the Psy.D. as opposed to the Ph.D. on the completion of training would be consistent with an explicit declaration by the programme of its endorsement of this model of research training and practice emphasis.

Programme Structure and Length

As noted above, there are many ways in which to deliver information in addition to formal academic course work. It is obvious, however, that a substantial portion of information imparted in a Psy.D. training programme will be through graduate-level academic course work. Individual training centres may decide which of the identified content domains noted are best presented in a course context and which are best delivered through another instructional technique such as practicum experiences. (This obviously will require discussion and co-ordination with practicum placements associated with the training programme.)

Delivery of the knowledge bases and skills contained within most of the content areas presented in previous sections within a course format are suggested to require a term-length course at the graduate level. In cases where two parts to a content area are indicated, it is estimated that two terms of graduate study will likely be required given the complexity and/or amount of knowledge and skill indicated. A full term course is taken to consist of three hours of weekly "classroom" (lecture or lab or supervision) time for a period of approximately 13 weeks. Not all training centres are expected to employ this system, nor is any one programme expected to do so for all of the content areas. Adequacy and format of instructional time to deliver course content is a matter to be determined by individual training programmes in keeping with their experience and declared training objectives. The programme should monitor and evaluate the effectiveness of their efforts themselves and by consultation with accreditation and regulatory bodies.

Programmes may wish to offer "tracks" or "concentrations" within the broader curriculum, through which students may pursue advanced study and develop more extensive expertise in particular areas of faculty strength: for example, concentrations in adult cognitive-behavioural and/or psychodynamic treatment, child and family problems, neuropsychological assessment, and/or community psychology. Nevertheless, in keeping with accreditation standards, doctoral training is essentially generalist in nature.

The proposed model curriculum includes a minimum 600-hour clinical practicum, as required by the CPA Accreditation standards (2002), although programs may permit students in good standing to acquire more practicum experience. The timing of the required practicum with regard to placement in the programme, and whether the practicum should be primarily a full-time experience or divided into part-time placements over a longer period, should be decided by the programme in accord with the Accreditation standards II H and III B that practice, theory and research should be integrated early, graded in complexity, and appropriately sequenced.

A full-year, full-time (minimum 1600 hours) internship, as specified by the CPA Accreditation Standards (2002), is also included in the model. The CPA standards allow for internship training to be completed either full-time over one year or half-time over two consecutive years.

The model further suggests that two terms or the equivalent to be devoted full-time to a research exercise or exercises. The Psy.D. model departs from the Ph.D. model here in that the time devoted to the satisfactory completion of the research experience is time-limited. Programs may wish for students to complete this requirement on a full-time basis after course work is completed by undertaking a major research project or, as outlined in the sample curriculum, to divide the experience into two or more stages which can be completed in sequence over the course of training. An important aspect of this exercise,

which takes place in the field, is the development of appropriate preparatory skills, supervision models, evaluation criteria, and formative and summative evaluation tools along the way. It is strongly recommended that programs adopt strategies to ensure the dissertation to be completed before students embark on internship.

As noted previously, an Honours B.A. in psychology is required for entrance into most graduate training programmes in Canada. The CPA Accreditation Standards (CPA, 2002) make provision for this in specifying that for the purpose of competence in most core content areas, two terms of senior undergraduate course work may be taken as the equivalent of one term of graduate work. Quebec universities, in conjunction with the Ordre des psychologues du Québec (2001), have in fact recently specified minimal undergraduate credit and content requirements as criteria for admission to doctoral programmes whose graduates are recognized as meeting licensing requirements of the Order.

Psy.D. programs in the United States, requiring demonstration of competence in all five core areas by graduate level coursework, typically require five years of study, including four years of coursework, research and practica, followed by a one-year internship. Assuming credit for three core areas on the basis of senior undergraduate work, the Psy. D. model described here requires a minimum of four years of study, including 7 terms of coursework and pratica, two terms devoted to research, and another year to the internship for completion. This is the Psy.D. model proposed by the Ordre des psychologues du Québec and some Quebec universities. Obviously, the proposed model needs to be empirically evaluated, and it is within the decision making responsibilities of the individual training centre to extend the length of this training if judged necessary.

An Illustrative Psy.D. Curriculum

Year 1

Fall term:

Introduction to Psychological Measurement and Assessment
Psychopathology
Assessment Practicum 1
Introduction to Research Methods in Applied Clinical Psychology
Core content course (e.g. advanced social psychology, developmental psychology)

Winter term:

Second course in Assessment and Measurement (e.g., choice of adult, child, neuropsychological, personality, psychodiagnosis)
Assessment Practicum 2
Empirically-supported psychotherapies
Psychopharmacology

Summer term:

Research, culminating in thesis proposal

Year 2

Fall term:

Methods of Data Analysis in Clinical Psychology (choice of Quantitative or Qualitative)
Assessment, Psychotherapy, and Cultural Diversity
Intervention option (e.g., choice of cognitive-behavioural, psychodynamic with adults; child therapies)
Practicum 1 in Intervention

Winter term:

Ethical and Professional Issues in Clinical Psychology
Second Intervention option (e.g., choice of cognitive-behavioural, psychodynamic with adults; child therapies)
Program Evaluation
Practicum 2 in intervention (may be a continuation of Practicum 1)

Summer term:

Research

Year 3

Fall term:

Third Intervention option (e.g., choice of group, couple, family interventions)
Practicum 3 in intervention
Consultation and Professional Practice
Elective course (e.g., child and adolescent psychopathology, prevention science, behavioural medicine)

Winter term:

Advanced Clinical Seminar
Elective course (see above)
Interpersonal Relations in Therapy, Supervision
Practicum 4 in intervention (may be a continuation of Practicum 3)
Thesis defense

Summer term:

Final thesis revisions

Year 4

Internship

Programme Adaptations for Mid-Career Training

A significant number of applicants to Psy.D. training programmes might be experienced practitioners holding a Masters degree in psychology. Such an applicant should be credited with advanced standing for appropriate experience and previous academic study. For example, he/ she might be skilled in psychometric assessment and report-writing, and thus merit exemption from all or most of the introductory coursework and practica related to assessment. Similarly, they would likely be exempt from introductory therapy practica. However, careful analysis of individual background is warranted; for example, the experienced applicant's training might be out of date with respect to specific empirically supported interventions, with respect to core area coursework and/or with respect to recent psychometric procedures to inform the interpretation of standardized test scores. Programmes might wish to develop a consistent policy with respect to the recentness of previous coursework for exemption from the core content areas, and to exemption from practicum requirements. Avoidance of dual relationships will need to be considered in arranging advanced practicum experiences and internships for those practitioners continuing their employment concurrent with their studies. In programme publicity, interested experienced potential applicants might be advised to complete some recent senior undergraduate courses in the core content areas, both to update evidence of academic expertise and potentially to reduce later courseload. Programmes will need to develop policy on degree of exemption on the basis of amount, variety, and/or skill-level of previous experience. As in undergraduate programs, they will likely wish to set a lower limit on the minimum number of completed programme experiences necessary to graduate. As in graduate programs, the maximum permitted length of part-time studies will need to be set.

The Use of Practitioner Psychologists as Psy.D. Training Instructors

Our model encourages the possibility that some of the courses be taught by practitioners or be co-instructed by both a practitioner and a faculty member. We realise that many faculty members have highly developed clinical skills and may maintain a practice in addition to their academic responsibilities. It is also true that many practitioners teach part-time. It is our sense that members of each group bring a complementary perspective to the training of professional psychologists. Exposure to the practitioner perspective beyond that obtained in a practicum and internship may prove to be a valuable aid in facilitating the transfer of competency, knowledge and skill from the academic to the practice environment in a programme offering a practice-oriented degree. We also realise that budget restrictions may preclude hiring part-time faculty and that in

some geographic areas the supply of practitioners willing and able to teach appropriate material may be limited. We offer this nonetheless as an aspirational goal and have indicated with a footnote which competency-knowledge base-skill groupings might be particularly amenable to practitioner instruction or co-instruction.

Summary and Concluding Remarks

In its report to the CPA (1998), the Psy.D. Task Force developed cogent and balanced arguments with regard to the reasons for endorsing the inclusion of the Psy.D. training model in psychology. These are not repeated here.

The most obvious differences between the Ph.D. and Psy.D. models is the role that research plays, initially in training and, later, in practice. An important aspect of Psy. D. training is the development of knowledge, skills, and attitudes relevant to the solution of applied problems, using an appropriate strategy of disciplined inquiry. In other aspects, the two training models are more similar than they are different. Training in both models should result in competency as a professional psychologist. Exposure to knowledge bases should be the same for both, as should exposure to skill development, other than in the research requirement.

There are many ways to deliver information in a curriculum in addition to formal academic course work. Practica and internship experiences, research exercises, independent study and less formal didactic interaction between student and teacher outside of the classroom are examples of additional information delivery methods.

The Psy. D. degree is proposed for adoption by those institutions and programs that choose to emphasise the scholar-practitioner (local scientist) research training. For reasons clearly articulated in the Task Force Report (1998), scholar-practitioner training only in university-based psychology programmes is endorsed.

Assuming admission with an honours undergraduate degree, the proposed model requires a minimum of seven terms of academic study, two terms devoted to research, and another year to the internship for completion of the training programme. Obviously, it is within the decision-making responsibilities of the individual training centre to extend the length of this training if warranted.

A significant number of applicants to Psy.D. training programmes might be experienced practitioners holding a Masters degree in psychology. Such an applicant should be credited with advanced standing for appropriate experience and previous academic study. However, careful analysis of individual background is warranted.

The funding of students engaged in Psy.D. programs is an important issue beyond the scope of this document. The curriculum outlined requires a full-time commitment for at least four-years, precluding outside employment except in the case of part-time study. It is to be noted, however, that students engaged in the time-limited Psy.D. research experience proposed are unlikely to be eligible for funding from the federal research councils. Thus, programs will have to carefully consider sources of funding for their students.

Placing specific competencies, knowledge bases, core competencies, training and skills within specific content areas (see Appendices), might suggest an interpretation or definition of them that was not intended by their authors. In the same vein, the illustrative course outline might merit modification. Any such errors are the authors and not those of the Canadian Psychological Association.

We have proposed a model Psy.D. curriculum. It is of course only one of a number of possible models, and its efficacy in achieving the goals of individual competence and program accreditation remain to be empirically tested. We reiterate that this model is not meant to be prescriptive but rather to serve as a focus to encourage reflection and discussion. Comments are welcome and they may be sent to the Canadian Psychological Association cpa@cpa.ca.

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Consultations and Communications

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Appendix I

Competencies: A review of contributions from various sources

It is clear that terminological differences exist in the earlier documents reviewed in the preparation of this report. The Psy.D. Task Force report (CPA, 1998) lists 10 competencies and 10 knowledge domains. The Task Force uses terms such as selection, application, activity, method, process and ability, in addition to skill. It appears that 16 skills are specifically identified in that report. The Canadian Regulatory Bodies (MRA, 2001) describe six competencies, and list 24 items under knowledge and 30 under skills. The Mississauga Conference Report (CPA, 1995) addresses core knowledge, skills and training but in a circumscribed area. The CPA Accreditation Panel standards (CPA, 2002) do not employ either the term competencies or knowledge but describe 9 items as either core content or topic areas and describe another 5 items as skills.

These differences are clearly due to differences in operational definitions, classification schemes, semantics and level of detail. The four documents were written for different purposes by groups with differing mandates and responsibilities.

An early explication of the competencies that should result from the education and training of professional psychologists emerged from the conference of the National Council of Schools of Professional Psychology (NCSPP), held in Mission Bay, California, in 1987. These competencies were reaffirmed and further developed at the NCSPP 1990 conference and have been published in several places (McHolland, 1992; Peterson, *et al.*, 1997). The competencies are:

1) relationship,
2) assessment,
3) intervention,
4) research and evaluation,
5) consultation and education,
6) management and supervision.

The CPA Psy.D. Task Force (CPA, 1998) identified 10 competencies, two in science:

1) statistics,
2) research design and methods

and eight in practice:

1) interpersonal skills,
2) assessment,

3) intervention,
4) application of research,
5) evaluating the efficacy of intervention,
6) consultation and teaching,
7) administration and supervision,
8) appropriate attitudes, knowledge and skill with reference to the application of ethical principles.

The Canadian Regulatory Bodies in Psychology developed a list of competencies for the purposes of the Agreement on Internal Trade (AIT) (MRA, 2001)). As we indicated above, the list was not intended as a comprehensive template for the training of professional psychologists but rather to articulate areas in which registered psychologists in Canada must demonstrate an appropriate level of professional competency. The regulators identified five competencies and provided each competency with a definition and associated sets of knowledge and skills. The competencies identified included:

1) interpersonal relationships,
2) assessment and evaluation,
3) intervention and consultation,
4) research,
5) ethics and standards.

Knowledge Bases: A review of contributions from various sources

National Council of Schools of Professional Psychology (NCSPP)

The NCSPP (McHolland, 1992) has delineated "an evolving and developing knowledge base" for professional psychology training. These are similar to the knowledge base developed by the Joint Council on Professional Education in Psychology (JEPEP, 1990), of which the NCSPP was a part. The NCSPP knowledge base includes the following 10 areas:

1) biological bases of behaviour,
2) cognitive-affective bases of behaviour,
3) cultural bases of behaviour,
4) dysfunctional behaviour and psychopathology,
5) the history and philosophical context of psychology,
6) life span development,
7) professional ethics and standards,
8) psychological measurement,
9) social bases of behaviour,
10) theories of individual and systems functioning and change.

National Register of Health Care Providers in Psychology (NRHSPP) and the Association of State and Provincial Psychology Boards (ASPPB)

NRHSPP and ASPPB have jointly developed a set of guidelines (NRHSPP, 2001; also reported in Edwards, 1996) specifying that the curriculum of a doctoral programme in psychology should encompass instruction in:

1) scientific and professional ethics and standards,
2) research design and methodology,
3) statistics and psychometrics

and a minimum of three or more graduate-level semester hours in each of the areas of:

1) biological bases of behaviour,
2) cognitive-affective bases of behaviour,
3) social bases of behaviour,
4) individual differences.

CPA Psy.D. Task Force

The CPA Psy.D. Task Force (CPA, 1998) specified that education and training in professional psychology must ensure particular attention to the following knowledge domains:

1) theories of individual and systems functioning and change,
2) life span development,
3) dysfunctional behaviour or psychopathology,
4) professional ethics and standards,
5) psychological measurement
6) history and systems of psychology.

The Task Force further specified that acquisition of knowledge in the following four areas should be required:

1) biological bases of behaviour,
2) cognitive-affective bases of behaviour,
3) social bases of behaviour,
4) individual bases of behaviour.

Canadian Regulatory Bodies

The Canadian Regulatory Bodies (MRA, 2001) in their AIT document iterated the following knowledge areas in the explication of the six competencies they identified:

Interpersonal Relationships
1) theories and empirical data on the professional relationship,
2) self-knowledge,
3) knowledge of others.

Assessment and Evaluation
1) assessment methods,
2) knowledge of populations served,
3) human development,
4) diagnosis.

Intervention and Consultation
1) varied interventions with individuals and systems,
2) respect for the positive aspects of all major approaches, reflected by an openness to varied viewpoints and methods,
3) awareness of when to make appropriate referrals and consult,
4) awareness of context and diversity,
5) interventions that promote health and wellness,

Research
1) applied statistics and measurement theory,
2) logic of different methods of scientific research,
3) qualitative research methods.

Ethics and Standards
1) ethical principles,
2) standards of professional conduct,
3) responsibilities to clients, society, the profession and colleagues,
4) awareness of potentially conflicting principles,
5) standards for psychological tests and measurement,
6) standards for conducting psychological research
7) jurisprudence and local knowledge.

Supervision
1) Models for supervision
2) Methods and techniques of supervision
3) Evaluation modalities
4) Available technical resources
5) Power relationships as well as cultural, gender isuues and ethnic differences

CPA Accreditation Panel

The CPA Accreditation Panel current standards (CPA, 2002) for training in clinical psychology require demonstrated competence in five content areas:

1) biological bases of behaviour,
2) cognitive-affective bases of behaviour,
3) social bases of behaviour,
4) individual behaviour,
5) history and systems of psychology.

The standards hold that competence may be demonstrated either by passing suitable examinations in each area or by successfully completing at least one half-year graduate course or two semesters of undergraduate coursework in each area.

Graduate level instruction on the following topics is required by the draft standards:

1) scientific and professional ethics and standards,
2) research design and methodology,
3) statistics,
4) test construction and psychological measurement.

The current standards also require training in the following skills:

1) psychological assessment,
2) intervention,
3) consultation,
4) programme development and evaluation,
5) clinical supervision.

Additionally, the standards require that all programmes include training in:

1) empirically-supported interventions,
2) more than one therapeutic modality.

The current standards also require that programmes provide students with didactic instruction and practical experience in human diversity as it affects and is affected by psychological phenomena and professional practice.

Finally, the standards also elucidate knowledge bases (as well as skill sets) that are to be facilitated during the practicum and internship. Our mandate is to design a model curriculum that includes a practicum and internship but not to comment on the content and experience to be found in such settings. However, we do draw the reader's attention to the fact that the Accreditation Panel has described these knowledge bases and skill sets.

Skills: A review of contributions from various sources

The Mississauga Conference on Professional Psychology

The Funding Group of the Conference articulated a principle that every psychologist should have core knowledge and skills in good business practice in psychology, comprised of the following:

1) business and management practices including organisational development and programme evaluation,
2) developing entrepreneurial skills,
3) monitoring and adopting best practices,
4) developing strategic alliances,
5) marketing professional services, including market analysis, developing service programmes and identifying funding/payment methods and sources,
6) maintaining visibility and networking,
7) selling and negotiating,
8) business ethics.

The Advocacy Group of the Conference expressed as part of its action plan that psychology training programmes be encouraged to include a business/management/advocacy component to their programmes.

CPA Psy.D. Task Force

The Task Force Report (1998) identifies the following skills associated with competencies. In some instances, the Task Force used the terms selection, application, activity, method, process and ability. It is the authors' inference that the term skill can be substituted in these cases:

Research Design and Methods

1) enough basic skill in conducting scientific research to be able to design and execute competent projects in professional and in some cases academic contexts with the support of properly trained consultants
2) observation, logic and the generation of plausible inference
3) attitude and judgement skills, including:
   openness and receptivity to the multiple ways of looking at a problem (as opposed to dogmatism) and the various strengths and limitations of these approaches

   respect for empirical support (either local support or support offered in the scientific literature) for a particular viewpoint, tempered by:
   a healthy scepticism about the certainty

such support affords and the appropriateness of its application to particular circumstances

explicit recognition of one's own biases and predilections and how these might serve to limit inquiry in deleterious ways

explicit recognition of the interplay between ethics and scientific inquiry especially with respect to special issues that arise in local circumstances

explicit recognition of the needs for collegial input and feedback in any inquiry however routine

Interpersonal Skills
1) interviewing
2) relationship skills including interactions in cross-cultural contexts and across socio-economic levels, varied life-styles and gender differences

Assessment
1) selecting and applying various assessment methods

Intervention
1) activities that promote positive client development or change, reflecting various psychological theories, procedures and techniques which address individuals, families, groups and organisations
2) methods appropriate to the understanding of self and self-other relationships, as well as to the significance of power and authority

Application of Research
1) ability to apply scientifically derived knowledge in professional practice
2) ability to be appropriately critical of interventions and services

Consultation and Teaching
1) consultation process and methods
2) teaching skills

Administration and Supervision
1) supervision methods
2) basic administrative methods
3) peer review processes

Ethics
1) appropriate skill with reference to the application of ethical principles

Canadian Regulatory Bodies

The Canadian Regulatory Bodies (MRA, 2001) list the following skills associated with each of the specified competencies:

Interpersonal Relationships
1) effective communication
2) establishment and maintenance of rapport
3) establishment and maintenance of trust and respect in the professional relationship

Assessment and Evaluation
1) formulation of referral questions
2) selection of methods
3) information collection and processing
4) psychometric methods
5) formulation of hypotheses and making a diagnosis when appropriate
6) report writing
7) formulation of an action plan

Intervention and Consultation
1) establish and maintain professional relationships from all populations served
2) establish and maintain appropriate interdisciplinary relationships with colleagues
3) gather information about the nature and severity of problems and formulate hypotheses about the factors that are contributing to the problem through qualitative and quantitative means
4) select appropriate intervention methods
5) analyse the information, develop a conceptual framework and communicate this to the client

Research
1) critical reasoning skills
2) applications of various research approaches to social systems
3) ability to write professional research reports

Ethics and Standards
1) ethical decision making process
2) proactive identification of potential ethical dilemmas
3) resolution of ethical dilemmas

Supervision
1) sensitivity to power, cultural, sex, and ethnic issues,
2) articulation of clear learning objectives
3) creating an open and participatory climate

4) learning to be a good supervisee
5) ability to link learning approaches to specific evaluation criteria
6) being able to differentiate between teaching and therapy
7) integration of knowledge
8) awareness of one's own strengths and limitations as a supervisor
9) preparing a coherent evaluation based on precise learning objectives.

CPA Accreditation Panel

The CPA Accreditation Panel, in its standards, lists the following as skills for competent professional functioning:

1) psychological assessment,
2) intervention,
3) consultation,
4) programme development and evaluation,
5) clinical supervision.

Appendix II

Relationships among Content Areas in the Model Curriculum and Competencies, Knowledge Bases and Skills

Not all of the knowledge bases and skills described in the documents reviewed are included in the content areas outlined here. That material omitted is almost exclusively from the regulators' paper. Some of the specific knowledge bases and skill sets specified there (for example, formulating a referral question or an action plan or writing a research report) appear more specific than the level of detail of this report. They are suited to being taught in an applied (i.e., practicum or internship setting or research experience) environment or are best seen as modules embedded in a classroom course.

Abnormal Psychology

Psy.D. Task Force:
- Knowledge
  - dysfunctional behaviour or psychopathology

Accreditation Panel:
- Core Content
  - individual behaviour
    - abnormal psychology

Regulators:
- Competency
  - Assessment and Evaluation
    - Knowledge
      - diagnosis

Assessment Methods

Psy.D. Task Force:
- Knowledge
  - psychological measurement
  - dysfunctional behaviour or psychopathology
- Competency
  - assessment
    - the primary purpose of assessment is to provide an understanding that informs a practical plan of action rather than producing a diagnostic classification as an end in itself
- Skills
  - selecting and applying various assessment methods to describe, conceptualise and characterise professional decisions and services

Accreditation Panel:
- Skill
  - psychological assessment
  - intervention

Regulators:
- Competency
  - Assessment and Evaluation
    - Knowledge
      - assessment methods
    - Skill
      - selection of methods
      - psychometric methods
      - information collection and processing

Biological Psychology I and II and Cognitive-affective behaviour

Psy.D. Task Force:
- Knowledge
  - biological bases of behaviour
    - physiological and comparative psychology, neuropsychology
  - cognitive-affective bases of behaviour
    - learning, memory, perception, cognition, thinking, motivation, emotion
- Competency
  - Intervention
  - basic understanding of biomedical technology

Accreditation Panel:
- Core Content
  - biological bases of behaviour
    - physiological psychology
    - neuropsychology
  - cognitive-affective bases of behaviour
    - learning, memory, sensation, perception, cognition, thinking, motivation, emotion

Business and Management Skills

Psy.D. Task Force:
- Knowledge
  - professional ethics and standards

Competencies
administration and supervision
basic administrative principles

evaluating the efficacy of intervention
cost-effectiveness

Skill
basic administrative methods

Accreditation Panel:
Instruction Topic
professional ethics and standards

Skill
programme development and evaluation

Regulators:
Competency
Ethics and Standards
Knowledge
standards of professional conduct

responsibilities to clients, society, the profession and colleagues

Mississauga Conference:
Core Knowledge and Skills
business and management practices including organisational development and programme evaluation

developing entrepreneurial skills

monitoring and adopting best practices

developing strategic alliances

marketing professional services, including market analysis, developing service programmes and identifying funding/payment methods and sources

maintaining visibility and networking

selling and negotiating

business ethics

Training
business, management and advocacy

Clinical Supervision and Teaching

Psy.D. Task Force:

Competency

administration and supervision

Competency

consultation and teaching

teaching skills and technology of knowledge dissemination

Skill

supervision methods

peer review processes

Consultation

Psy.D. Task Force:

Competencies

consultation and teaching

administration and supervision

intervention

knowledge of prevention science

Skills

consultation process and methods

supervision methods

peer review processes

methods appropriate to the understanding of self and self-other relationships, as well as the significance of power and authority

Accreditation Panel:

Skills

consultation

clinical supervision

intervention

Regulators:

Competency

Intervention and Consultation

Knowledge

a respect for the positive aspects of all major approaches, which should reflect an openness to varied viewpoints and methods

varied interventions with individuals and systems

Skills

establish and maintain professional relationships with clients from all populations served

establish and maintain appropriate interdisciplinary relationships with colleagues

gather information about the nature and severity of problems and formulate hypotheses about the factors that are contributing to the problem through qualitative and quantitative means

select appropriate intervention methods

for consultation, historical context including the development of community psychology and the concepts of primary and secondary prevention

Couple, Family and Group Therapy

Psy.D. Task Force:

Knowledge

theories of individual functioning and change

dysfunctional behaviour or psychopathology

social bases of behaviour (group and family processes)

Competency

Intervention

information derived from psychotherapy research

Skills

activities that promote positive client development or change reflecting various psychological theories, procedures and techniques which address families and groups;

Accreditation Panel:

Training

training in more than one therapeutic modality (couple, family, group)

Skill

intervention

Regulators:

Competency
Intervention and Consultation
Knowledge
the learning of an array of varied interventions with systems (e.g., couples, families, groups)

Developmental Psychology I and II

Psy.D. Task Force:
Knowledge
life span development

Accreditation Panel:
Core Content
individual behaviour
human development

Regulators:
Competency
Assessment and Evaluation
Knowledge
human development

Diversity

Psy.D. Task Force:
Knowledge
theories of individual functioning and change

social bases of behaviour
(sexual orientation, gender differences)

individual bases of behaviour
(cultural and ethnic group differences, bicultural processes, generational differences within ethnic populations)

Skills
understanding and development of interactions in cross-cultural contexts and across socio-economic levels, varied life-styles and gender differences

Accreditation Panel:
Diversity
human diversity includes but is not limited to culture, religion, race, nationality, language, sexual orientation, physical, psychological and intellectual characteristics, lifestyle, gender, socio-economic status

the [training programme] comprehensively and systematically provides its students with didactic instruction and practical experience about the variability in human diversity as it affects and is affected by psychological phenomena and professional practice

Core Content
Social bases of behaviour
cultural and ethnic processes
sex roles

Regulators:
Competency
Interpersonal Relationships
Knowledge
knowledge of others
macro-environment
national customs
micro-environment
personal and gender differences

Competency
Intervention and Consultation
Knowledge
awareness of context and diversity
Competency
Assessment and Evaluation
Knowledge
knowledge of populations served

Empirically Supported Interventions

Psy.D. Task Force:
Knowledge
theories of individual functioning and change

Competency
Intervention
information derived from psychotherapy research

Skills
activities that promote positive client development and change, reflecting various psychological theories, procedures and techniques

Accreditation Panel:
Training
training in empirically supported interventions

Skill
intervention

Regulators:
- Competency
  - Intervention and Consultation
    - Knowledge
      - varied interventions with individuals and systems
      - a respect for the positive aspects of all major approaches, which should reflect an openness to varied viewpoints and methods
      - knowledge of interventions that promote health and wellness
    - Skill
      - select appropriate intervention methods

Ethics, Standards and Legislation

Psy.D. Task Force:
- Knowledge
  - professional ethics and standards
  - appropriate knowledge with reference to the application of ethical principles
- Competency
  - appropriate attitudes with reference to the application of ethical principles
- Skill
  - appropriate skill with reference to the application of ethical principles

Accreditation Panel:
- Instruction
  - scientific and professional ethics and standards

Regulators:
- Competency
  - Ethics and Standards
    - Knowledge
      - ethical principles
      - standards of professional conduct responsibilities to clients, society, the profession and colleagues
      - awareness of potentially conflicting principles
      - standards for psychological tests and measurements

standards for conducting psychological research

jurisprudence and local knowledge

Skills

ethical decision-making process

proactive identification of potential ethical dilemmas

resolution of ethical dilemmas

Competency

Interpersonal Relationships

Knowledge

knowledge of self such as motivation, resources, values, personal biases and factors that may influence the professional relationship

Mississauga Conference:

Knowledge

business ethics

History and Systems

Psy.D. Task Force

Knowledge

history and systems of psychology

Accreditation Panel:

Core Content

history and systems of psychology

Interpersonal Skills in Professional Practice

Psy.D. Task Force:

Knowledge

theories of individual functioning and change

Competencies

interpersonal skills

understanding and development of relationship skills

intervention

information derived from psychotherapy research

Skills

interviewing skills

methods appropriate to the understanding of self and self-other relationships as well as to the significance of power and authority

Accreditation Panel:
Skills
Intervention
planning, techniques
Regulators:
Competency
Interpersonal relationships
Knowledge
Theories and empirical data on the professional relationship
(interpersonal relationships, power relationships, therapeutic alliance, knowledge of fluctuations of the therapeutic/professional relationship as a function of intervention setting)

Self-knowledge
factors that may influence the professional relationship (e.g., boundary issues)

Skills
effective communication

establishment and maintenance of rapport

establishment and maintenance of trust in the therapeutic relationship

Measurement Theory

Psy.D. Task Force:
Knowledge
psychological measurement

Accreditation Panel:
Instruction Topic
test construction and psychological measurement

Regulators:
Competency
Research
Knowledge
applied statistics and measurement theory

Psychopharmacology

Psy.D. Task Force:
Knowledge
biological bases of behaviour (psychcopharmacology)

Competency

Intervention

activities that promote positive client development or change including basic understanding of psychopharmacology

Accreditation Panel:

Core Content

biological bases of behaviour

psychopharmacology

Qualitative Research and Programme Development and Evaluation

Psy.D. Task Force:

Competencies

statistics

research design and methods (qualitative)

a basic understanding and respect for the scientific bases of the discipline

methodological knowledge designed to make students good consumers of psychological knowledge products

intervention

knowledge of prevention science

evaluating the efficacy of intervention

outcome effectiveness, reasonable accessibility, cost-effectiveness

application of research

ability to apply scientifically derived knowledge in professional practice

ability to be appropriately critical of interventions and services

Skills

enough basic skill in conducting scientific research to be able to design and execute competent products in professional and in some cases academic contexts with the support of properly trained consultants (e.g., statisticians)

skills in observation, logic and the generation of plausible inference

attitude and judgement skills related to professional inquiry and problem solving including openness and receptivity to multiple ways of looking at a problem and the various strengths and limitations of these approaches

respect for empirical support tempered by
a healthy scepticism about the certainty that such support affords and the appropriateness of its application to particular circumstances
explicit recognition of one's own biases and predilections and how these might serve to limit inquiry in deleterious ways
explicit recognition of the interplay between ethics and scientific inquiry especially with respect to special issues that arise in local circumstances
and explicit recognition of the need for collegial input and feedback in any inquiry, however routine

Accreditation Panel:
Instruction Topics
research design and methodology

statistics

Skills
intervention

evaluation

programme development and evaluation

Regulators:
Competency
Research
Knowledge
the logic of different models of scientific research

qualitative research methods

Skills
critical reasoning skills

applications of various research approaches to social systems

Competency
Intervention and Consultation
Knowledge
varied interventions with individuals and systems

concepts of primary and secondary prevention

Mississauga Conference:
Core Knowledge and Skills
business and management practices including programme evaluation

Social Psychology

Psy.D. Task Force:
Knowledge
social bases of behaviour
(social psychology, group processes, organisational theory)

theory of systems functioning and change

Competency
Intervention
activities that promote positive client development or change which address groups and organisations

Accreditation Panel:
Core Content
Social bases of behaviour
social psychology

organisational and systems theory

group processes

Regulators:
Competency
Interpersonal Relationships
Knowledge
Theories and empirical data on the professional relationship
(interface with social psychology)

Intervention and Consultation
Knowledge
learning an array of varied interventions with systems (e.g., groups and organisations)

Mississauga Conference:
Core Knowledge and Skills
business and management practices including organisational development

Statistics and Research Design I and II

Psy.D. Task Force:
Competency
statistics (descriptive and inferential)

research design and methods (quantitative)
a basic understanding and respect for the scientific bases of the discipline

methodological knowledge designed to make students good consumers of psychological knowledge products

application of research
attitude and judgement skills related to professional inquiry and problem solving including openness and receptivity to multiple ways of looking at a problem and the various strengths and limitations of these approaches

respect for empirical support tempered by
a healthy scepticism about the certainty that such support affords and the appropriateness of its application to particular circumstances
explicit recognition of one's own biases and predilections and how these might serve to limit inquiry in deleterious ways
explicit recognition of the interplay between ethics and scientific inquiry especially with respect to special issues that arise in local circumstances
and explicit recognition of the need for collegial input and feedback in any inquiry, however routine

Accreditation Panel:
Instruction
research design and methodology

statistics
ability to apply scientifically derived knowledge in professional practice

ability to be appropriately critical

Skills
enough basic skill in conducting scientific research to be able to design and execute competent products in professional and in some cases academic contexts with the support of properly trained consultants (e.g., statisticians)

skills in observation, logic and the generation of plausible inference

Regulators:
Competency
Research
Knowledge
applied statistics

the logic of different models of scientific research

Theories of Learning and Behaviour Change

Psy.D. Task Force:
- Knowledge
  - theory of individual functioning and change
  - cognitive-affective bases of behaviour (learning)

Accreditation Panel:
- Core Content
  - cognitive-affective bases of behaviour
    - learning

Theories of Personality

Psy.D. Task Force:
- Knowledge
  - theory of individual functioning and change
  - life span development

Accreditation Panel:
- Core Content
  - individual behaviour
    - personality theory

Theories of Psychotherapy

Psy.D. Task Force:
- Knowledge
  - theories of individual functioning and change
  - dysfunctional behaviour or psychopathology
- Competency
  - Intervention
    - activities that promote positive client development or change reflecting various psychological theories, procedures and techniques;
    - information derived from psychotherapy research
  - Consultation and Teaching
    - teaching skills

Accreditation Panel:
- Skills
  - Intervention
    - techniques

Regulators:
- Competency
  - Intervention and Consultation
    - Knowledge
      - knowledge of interventions that promote health and wellness