

## FINAL ASSESSMENT REPORT

### Institutional Quality Assurance Program (IQAP) Review Psychology – M.Sc. and Ph.D.

**Date of Review: April 19<sup>th</sup> and 20<sup>th</sup>**

*In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the graduate programs delivered by Psychology. This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.*

*The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.*

#### **Executive Summary of the Review**

In accordance with the Institutional Quality Assurance Process (IQAP), the Psychology program submitted a self-study in March 2018 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its graduate programs. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Dean, Faculty of Science and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on April 19<sup>th</sup> and 20<sup>th</sup>, 2018. The visit included interviews with the Provost and Vice-President (Academic); Vice-Provost and Dean of Graduate Studies, Associate Dean, Grad Studies and Research, the Chair of the program, meetings with groups of current students, full-time faculty and support staff.

The Chair and the Dean of the Faculty of Science submitted responses to the Reviewers' Report (June 2018 and August 2018). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

#### **Strengths**

- PNB is a high functioning, collaborative, and integrated department, and this reflected

throughout the graduate program. The strengths of this program include a flexible and individualized program, a high degree of collaboration that allows each student to work with multiple faculty members, and extensive opportunities for graduate students to engage in mentorship of research assistants. PNB is unusual among psychology graduate programs in maintaining a well-integrated research-intensive program that has not split into multiple streams or fields of study.

- The IQAP review team stated in their review (page 5) that the “PNB graduate program is high quality and well-functioning”. They further stated that the program provides a rich and collaborative program for our students, and that PNB has an uncommonly high level of collaboration and cohesion across the department. They noted that we “successfully combine rigorous academic graduate training with a strong sense of collegiality”.
- The review team noted that research in PNB is very strong, based on publication and citation rates, as well as international reputation.
- The reviewers were very positive about the recent introduction of the Research and Clinical Training (RCT) stream. They stated that the objectives of this new stream, which is to provide a small number of students each year with opportunities for strong clinical research training, and to do so in a manner that maintains integrity with the PNB program more broadly, have been largely met. There is a high level of satisfaction with its current delivery and a strong sentiment that the success of the stream to this point is in large part owing to the strong partnership between PNB and Psychiatry that oversees its administration.
- The review committee expressed a positive opinion about the curriculum, in which the department achieves the program’s learning outcomes in a manner that reflects disciplinary trends in the field using a strong “teaching at the bench” apprenticeship model, and by interdisciplinary work, collaboration, and acquisition of strong statistical and computational skills.
- The review team emphasized the cohesion of PNB very positively, as follows: “The extent to which opportunities for collaboration and interdisciplinary research are built into all components of the curriculum was viewed by the reviewing committee as an especially innovative feature and unique strength of the PNB graduate program. We were struck by how purposeful this aspect of the curriculum design was, and to what degree it was reflected in the department culture as a whole, which exudes a spirit of cooperation and cohesion. It is more common for Psychology departments to be functionally split into separate research areas. The PNB department at McMaster has done exactly the opposite and maintains a remarkable level of cohesion across the subdisciplines of psychology, to the benefit of the graduate program.”
- In addition to the formal program requirements and expectations, students gain the opportunity during their graduate studies to develop strong mentorship skills by actively participating in the supervision of undergraduate project students and volunteers. It is common practice for undergraduate students in years 2, 3, and 4 to assist graduate students in their laboratory research, and to collaborate with graduate students on data analysis and writing papers. The committee was extremely impressed by the level of engagement of graduate students in this apprenticeship model that would clearly facilitate students in achieving many if not all of the Graduate Degree Level Expectations and corresponding

program learning outcomes.

- Even within the areas of improvement identified, the reviewers stated that the members of PNB seemed well-attuned to the challenges, and well-prepared to respond.

### **Areas for Enhancement or Improvement**

- The executive summary offered by the review team: In general we conclude that the PNB graduate program is of very high quality. All of our recommendations should be considered as minor recommendations and are not meant to detract from our general conclusion that this is a very strong program.
- The reviewers confirmed that the program functions very well but could be further enhanced through formalizing some processes in procedures. This would particularly benefit the program moving forward as new faculty members are recruited as supervisors. Providing clarity about topics such as composition and term length of the graduate studies committee, graduate course offerings, expectations around reading group courses would enhance the transparency of the program for newcomers without sacrificing the very strong sense of collegiality and community.
- During the review the topic of long-term funding for core facilities, such as the LiveLab, came up. This is a common challenge in Canada where there is a challenge in funding ongoing operation of infrastructure built with CFI funding. The review team stated that the PNB department and university will need to work together in the long-term for the operation of such facilities.
- PNB is top heavy due to challenges related to hiring. They have not been able to add to the faculty complement in recent years. Moreover, there is an imbalance in the male:female ratio in the research stream that has widened considerably over the last several years.
- The program would like to improve their skills at developing and offering workshops on professional development for both academic and industry related careers. This might be done effectively in collaboration with other departments, and to that end we will coordinate through School of Graduate Studies.

### **Summary of the Reviewers' Recommendations with the Department's and Dean's Responses**

**Recommendation 1 (Program):** PNB should continue to work with the Faculty of Science to identify how to use funds to attract international students and enhance internationalization. **Context:** The review team wrote: "The department has a very strong international reputation. Based on our meetings with faculty and graduate students, it appears there is a lack of clarity regarding the financial support recently made available for international graduate students. We see an opportunity here to build on existing strength. The PNB program should continue to work with SGS to identify how to use recent funds made available for international Ph.D. students in a manner to facilitate internationalization."

**Proposed Follow-Up:** The site visit (April 19-20, 2018) was held at the same time as changes to international graduate tuition and support were being discussed and implemented at McMaster, so the sense of lack of clarity when talking to faculty and students was likely a function of these new opportunities being in transition. The School of Graduate Studies (SGS) has been working closely with faculties and departments to optimize our international PhD student fee structure in light of the Ontario government's modified structure of funding to Ontario universities.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC), School of Graduate Studies (SGS).

**Timeline for Addressing Recommendation:** Ongoing now, in consultation with Faculty of Science and SGS.

**Recommendation 2 (Admission Requirements):** PNB should continue best practices in graduate student recruitment and work to ensure implicit biases are minimized throughout the recruitment process. **Context:** The review team wrote: "Based on discussions with faculty members it appears the program is already doing a good job of ensuring that admission is based on merit and not how sociable or "like us" the applicants are. We encourage the program to continue to face this challenge and to codify practices to continue to reduce any implicit biases (which we are all subject to) in the admission process."

**Proposed Follow-Up:** As a department they recognize the power of implicit biases and the challenges involved in identifying situations where implicit biases play a role. They have organized workshops around these issues and will continue to address this important issue going forward. With respect to graduate recruitment, they agree with the review committee that it is important to codify the assessment criteria used in the recruitment and admission process so that we can better evaluate our responses and work on minimizing effects of implicit biases. We would like to underline the importance of identifying and reducing implicit biases in other areas as well, such as hiring practices.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** Over the 2018-2019 academic year (and beyond) we will continue to improve our process for reviewing graduate applications, as well as improve our evaluation process over the recruitment weekend activities. They are mindful of the need to apply these same improvements to our hiring processes.

**Recommendation 3 (Curriculum):** The program should formalize existing criteria for student performance and progress to ensure that assessment of student progression is transparent and accountable. **Context:** The review team wrote: "While the committee was impressed by the element of flexibility that is built into the curriculum, allowing students to tailor their program in manner that best befits their interests and career development, we would encourage the department to continue to develop practices to ensure clear and accountable processes on student performance and progress. For example, it was not entirely clear to us what the process is (or whether there is a formal process in place) for following up with students who are identified as progressing with difficulty during the course of the annual evaluation meeting, and also for ensuring that students complete course requirements in a timely manner. Although we understand that the supervisory committee is expected to follow up with

the student and create a plan when performance is unsatisfactory, we would recommend that consideration also be given to the Graduate Chair providing a letter with feedback from the department.”

**Proposed Follow-Up:** The program stated that their procedure for monitoring individual student progress is quite good at present but could well benefit from additional measures as recommended by the IQAP review team. Currently, their process for monitoring progress is designed to create a paper trail of progress each year, including supervisory committee meeting reports, progress report evaluations, and review of each individual student at the annual June faculty meeting. Students who are not progressing as well as desired are identified at the June meeting and both the supervisory committee and the graduate chair follow up on these students. There is a process already in place such that a letter from the graduate chair and SGS is prepared when a student is substantially off-track in their progress. This is a very rare occurrence and they believe it is rare because our system of monitoring and guiding students is very successful. However, they agree with the IQAP review team that in some cases, a letter from the graduate chair with feedback from the department could be a valuable addition to our process. The GSC will develop a proposal for criteria for such a letter.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** This will be resolved over the 2018-2019 academic year.

**Recommendation 4 (Curriculum):** PNB should continue to ensure that adequate numbers of graduate courses are offered each year, with as much advance notice as possible in order to facilitate student planning. **Context:** The review team wrote: “We encourage the department to continue to be mindful of offering an adequate selection of courses each year, and to provide as much advanced notice of upcoming course offerings, such that students are able to optimize the feature of flexibility built into the program in a manner that is not constrained by course availability. This is an issue that came up in both our meetings with students and faculty. We recognize the challenges associated with timetabling of courses, and also that the department is making efforts to address the matter.” **Further context:** The review team also pointed out that PNB could set in place more explicit guidelines regarding course credit for reading groups and online courses: “While the committee applauds the flexibility and opportunity for program customization that this mode of delivery affords students, it was not clear to us what safeguards are in place to ensure quality control. We would encourage the department to develop a clearly articulated set of expectations and reporting process for the administration of these courses. Likewise, in the Self Study it is mentioned that students are sometimes given permission to complete online courses in fulfillment of course requirements. The process for approving these courses, or what assessment criteria they are expected to meet in order to ensure that they are achieving the intended learning outcomes is not clear. In addition, it is not mentioned whether there are a maximum number of credits that can be obtained via this option. We encourage the department to clearly articulate the approval process, including quality assurance. “

**Proposed Follow-Up:** Improvements in course offerings, especially providing advance notice of what will be offered in the coming year, is already underway. In the past, scheduling of undergraduate and graduate courses has been organized separately, with undergraduate commitments obtained in December and January, and graduate commitments obtained much

later in the year. The program sees an opportunity to improve scheduling of graduate courses by yoking the undergraduate and graduate scheduling. This way they can post graduate courses months earlier.

With respect to offering course credit for reading groups and online courses, the program thinks these options provide valuable flexibility for the students whose needs are diverse. In the case of course credit in a reading group setting, their approach has been to carefully structure content and assessment so that the requirements meet the expectations for a graduate level quarter-course or half-course. To this end, a course outline is constructed by the faculty member overseeing the reading group and is approved by the Graduate Studies Committee. In the case of an online course, the study module is negotiated between the student, the faculty member who oversees the student's work, and the Graduate Studies Committee. They have added information to our Graduate Handbook with specific guidelines regarding expectations and evaluation.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** The program had already started earlier this year to confirm course availability for 2018-2019. They expect to have the new system in place for 2019-2020. The GSC will prepare course substitution guidelines for implementation in 2018-2019.

**Recommendation 5 (Curriculum):** We commend the PNB department's attention to professional and transferable skills development in students, and recommend they continue these efforts at both the program level and in conjunction with SGS. **Context:** The review team wrote: It was the impression of the committee that more focused attention may be given to ensuring that students receive adequate opportunities for professional skills development, including encouraging students to take advantage of offerings by SGS. We understand that professional development is a component of the Contemporary Problems course that all students take in their first year, and is a component that is currently in development. We also recognize that the department has, since the last review, made efforts to prepare students for careers outside academia, including expanding course offerings in computational and skills-based methods, and organizing events that allow current in-program students to establish a network with former students who have successfully navigated the path to industry. We commend the department for these efforts, and encourage them to continue to develop this component of their curriculum."

**Proposed Follow-Up:** As the program outlined in their self-study, there are substantial efforts by SGS and the McMaster Graduate Student Association to offer workshops and other events that provide professional skills development. They already offer professional development classes as part of first year Contemporary Problems. They are working on improving these offerings for all of their students. Moreover, they are committed to learning more about the transition from academia to industry, so that the program can either provide workshops or point students to existing workshops that develop skills for both academia and industry.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** To start, the program will expand their professional development series in CP for 2018-2019, and continue to identify (on campus and in the community) or develop a wider selection of lectures and workshops across the next two years.

**Recommendation 6 (Teaching and Assessment):** We recommend that the PNB graduate studies committee continue to monitor the functioning of the Contemporary Problems course in light of recent and potential increased enrolment. **Context:** The review team wrote: “There is a sense among some students that the ‘program has outgrown the course’. We understand that discussions between faculty and students have begun on how some aspects of the course design may be modified to support growing enrollment numbers, but in a manner that does not compromise those features of the course that seem to be working well. We commend the department for already initiating conversation on this issue in response to student feedback received in the course of preparing the Self Study, and encourage them to continue to refine the delivery and assessment of the course in a manner that reflects changing enrollments in the department.”

**Proposed Follow-Up:** The Contemporary Problems (CP) course is team taught by a rotating set of faculty members each year and is meant to provide breadth of knowledge about current research areas in the department, as well as offer tutoring on issues related to professional development. Moreover, it serves an important cohort building function for the incoming class. As the incoming graduate class grows larger, they must reorganize the way they offer CP so that important features are not compromised (e.g. student involvement in discussions). The program is exploring options, in consultation with faculty and students, to revise some components of CP and will be implementing a set of changes in 2018-2019 to enhance this valuable course.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** They expect to transition over the next two years towards a model that can better satisfy the larger class sizes.

**Recommendation 7 (Teaching and Assessment):** PNB should continue its existing culture of sharing equipment and resources for graduate students across labs. **Context:** The review team suggested: “The department does not appear to have any current plans for renovations of facilities, but if and when such renovations are considered the program may benefit from moving from having graduate students and equipment housed in individual labs to a more open concept core facilities model. This would allow the physical layout of the department to more fully support the cohesive and collaborative nature of the program.”

**Proposed Follow-Up:** The collaborative nature of the graduate program helps to maintain their success with sharing equipment and resources. There is enough space in the human research labs for their students to have their own desks in the lab itself. However, this does not work for the animal research labs and in that case the students share space in an open concept space. There are advantages and disadvantages to both these models. If the program is fortunate enough to be able to renovate department facilities in the future, they will consider these pros and cons and decide whether to move to a more general open concept work space for all students.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** They do not expect to renovate facilities for all

graduate students in the near future, but they do evaluate student working space each year. For example, this year (2018-2019) they are redesigning the space for the graduate students working in animal research labs.

**Recommendation 8 (Academic Services):** PNB should work with central administration to ensure adequate access to site-licensed software required by graduate students. **Context:** In our review the only academic service that appeared to need improvement was central site licensing of necessary software packages. It was not clear if this would be a Faculty or University responsibility at McMaster. Provisioning site licenses for necessary core software (e.g. Qualtrics, MatLab) is typically most efficiently done at an administrative level higher than the department. We encourage an exploration of how to most effectively to provide licenses for core, and necessary, software packages that support the graduate program in PNB and others on campus.

**Proposed Follow-Up:** The program was in strong agreement that adequate access to site-licensed software is a critical element for productive research, and that this element could be improved at McMaster for some software packages such as Matlab. They will talk with administration at the faculty and university level to improve this critical support.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** The program will initiate these discussions immediately, over the 2018-2019 academic year.

**Recommendation 9 (System of Governance):** The department may wish to be more explicit in regard to detailing the policies by which the GSC makes decisions and implements changes, perhaps as part of the Faculty-wide process of updating Department by-laws and program handbooks.

**Proposed Follow-Up:** Over the 2017-2018 year the program has made substantial improvements by developing a PNB Graduate Handbook, as well as a handbook specific to the Research and Clinical Training stream. A graduate student committee was formed during the winter term (2017-2018) to work with the graduate chair to construct the PNB Graduate Handbook. We designed the Graduate Handbook as a WIKI so that changes can be made at anytime in collaboration with faculty and students. Thus, the PNB Graduate Handbook is a “living” document such that it is edited and improved each time a question is raised or a clarification is needed. They are also working on updating PNB department by-laws.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** These improvements are ongoing now; the program expects that updates will be needed each year. In fact, they are also revamping the department website on which department by-laws will be shared.

**Recommendation 10 (System of Governance):** Consideration may also be given to



implementing a system whereby membership of the GSC is determined by election with renewable fixed terms.

**Proposed Follow-Up:** Traditionally, the chair of the department is elected for a fixed term, and the associate chairs are selected by the chair for that same fixed term. The typical process for determining committee membership on GSC (as well as other department committees) involves a careful evaluation by the chair of the department of service and duties carried by faculty members. Assignment to committees is done in collaboration with associate chairs and the relevant faculty member so that the workload is shared fairly, and so that membership rotates across committees. Thus, each committee will usually have a rolling membership, with the chair of the committee first serving as a member of the committee for 2 or 3 years, and members of the committee cycling out to different committees after serving for 3 or 4 years on a staggered basis so that the committee always consists of new and experienced members. This system has worked very well for the department.

**Responsibility for Leading Follow-Up:** PNB chair, PNB associate chair (graduate), PNB Graduate Studies Committee (GSC).

**Timeline for Addressing Recommendation:** During the 2018-2019 academic year they will propose to the department the idea of changing our system such that the department would elect members of the GSC to serve over a fixed term.

### **Deans Response:**

This Dean's response was prepared by the Dean of Science with input from the Associate Dean of Science (Graduate). The Dean thanked the review team for their efforts during the site visit and preparation of the report. The review highlights the strengths of the PNB graduate program and indicate that it provides a high-quality, collaborative training atmosphere, and where impactful research is carried out by graduate students. It is worth noting that graduate enrolment in PNB has increased by about 25% since the last review took place in 2009, in part due to the new RCT stream. In spite of the substantial growth, the program has done extremely well with regards to maintaining the quality of the experience, the careful and consistent methods of assessments, and the overall academic progress of students.

The Program has provided a detailed response to the review recommendations and we agree with both the recommendations and those Program responses. In some specific areas we have provided additional information and context to supplement the program responses and action plans. The reviewers were positive about Program graduate curriculum map of learning outcomes and the fact that these meet degree level expectations. The Dean noted that the recommendations with regards to course offerings have been adequately addressed by the department and agreed with the timelines for implementation and action.

The recommendation to enhance reputation by recruiting international Ph.D. students is timely since starting 2018-19 McMaster has equalized the tuition of this category of students. This step should make PNB more attractive to recruit the best students from other countries. Also, Dr.

Bhagwati Gupta (Associate Dean of Science, Graduate) is working closely with PNB, as well as other graduate programs, in the Faculty of Science to develop graduate program specific international student strategic plans and to understand the associated resource needs to support these internationalization efforts.

The Dean agreed with the recommendation of developing best practices and accountable processes in order to follow up on performance and progress of students effectively. The program recognizes that it is an important issue and will be taking steps to strengthen the processes currently in place. The Faculty of Science will work to support these efforts.

The Faculty of Science supports efforts towards professional skill development of graduate students. In fact, McMaster is currently participating in one of the OCAV Taskforce pilot projects on Graduate Experiential Learning that is led by Bhagwati Gupta, Associate Dean of Science (Graduate). As part of the project, a subset of graduate programs from Science, as well as other Faculties, are being reviewed for curricular experiential learning activities. The outcome of this exercise is expected to help us engage with graduate programs and the School of Graduate Studies to further enhance the professional skills of the graduate students.

With respect to the recommendation to explore the possibility of centralized access to site-licensed software and packages, this is a topic of discussion at many levels of the McMaster University. McMaster recently purchased centralized access to Microsoft Office for all students, faculty and staff and similar solutions for high use software and IT resources are being explored. The new Information Technology (IT) governance process at McMaster will provide several opportunities for consideration of this, and similar recommendations in the future.

The cohesive and collaborative nature of the Department of PNB and the successes of its associated academic programs are outstanding examples of excellence within the Faculty of Science and McMaster University. The IQAP review process has provided an important opportunity for self-reflection, external review and subsequent refinement that will certainly enhance these already outstanding programs.

#### **Quality Assurance Committee Recommendation**

**McMaster's Quality Assurance Committee (QAC) reviewed the above documentation and the committee recommends that the program should follow the regular course of action with a progress report and subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.**

