

Research on Postgraduate Training Model of McGill University in Canada

Rui Zhao

School of Humanities and Law
Northeastern University
Shenyang, China 110169
Foreign Studies College
Northeastern University
Shenyang, China 110819

Wanbing Shi

Special Education Research Center
Nanjing Normal University of Special Education
Nanjing, China 210038

Abstract—This paper studies the postgraduate training model of McGill University in Canada by analyzing the basic situation of graduate education, enrollment methods, admission criteria, enrollment requirements, funding methods, student types, guidance methods, assessment and elimination systems and curriculum structure, curriculum evaluation and curriculum management. Its student-centered training model and the scientific spirit of pursuing excellence have provided valuable experience for graduate students in China.

Keywords—*McGill University; graduate student; training model*

I. INTRODUCTION

Founded in 1821, McGill University is a world-renowned research university. McGill University has a wide range of disciplines, including ten departments of agriculture and environmental science, literature, pedagogy, stomatology, engineering, law, management, medicine, science, and more than 400 master's and doctoral degree programs. It enjoys an excellent reputation in teaching and research.

As a research university, McGill attaches great importance to the cultivation of postgraduates and training them to improve their knowledge level and scientific research ability. In the 2015 academic year, McGill University enrolled 9431 postgraduates, including 4540 master's degree postgraduates, 3416 doctoral degree postgraduates, 1190 diploma and certificate course postgraduates, 285 unofficial admissions and visiting students, of which 5015 were from Quebec, 1560 were from other parts of Canada, and 2865 international student.[1]

II. ENROLLMENT METHODS AND ADMISSION CRITERIA

A. Enrollment Targets and Application Methods

The postgraduates of McGill University are those who hold a bachelor's degree or the same degree recognized by McGill University. They apply for up to two majors at a time. The postgraduate majors they apply for should be closely related to the majors they studied before. The target of enrollment of doctoral students generally also requires a

master's degree in related majors. Each major of the school has different requirements. Students fill out the online application form and submit application materials to apply according to relevant requirements. The Postgraduate Admission Committee of the all departments examines the application materials, draws up a list of recommendations for admission and submits it to the graduate and postdoctoral research offices of the university. After the examination of the graduate students and postdoctoral research office, the official admission notice is issued.

B. Enrollment Requirements

The application materials that students need to submit include the original and English translations issued by the university where the student is located. Two information of referrers (some professionals require three referrers, and McGill University contacts the referrers to obtain a recommendation letter). Certificate of English language proficiency within two years (certification must be submitted directly by the Language Testing Center to McGill University). Some majors also require students to submit resumes, GRE/GMAT scores, personal statements, research plans, and a writing example reflecting their thinking and research abilities. [2]

Different professions put different requirements on the professional foundation of students. For example, for a Master of Arts degree in economics, it generally requires a bachelor's degree in economics, but bachelor's degrees in other majors are also available. This major has requirements for both mathematics and economics courses taken by students. Students with insufficient foundations in these two areas need to become a "pre-admission student" for one year of relevant undergraduate courses.

1) *Certification of achievement at the baccalaureate / master level:* McGill University requires a minimum academic grade of CGPA3.2/4.0 at undergraduate level or CGPA3.0/4.0 in the last two years. Some majors have higher requirements, such as anthropology, which requires a minimum CGPA3.5/4.0. [3]

In order to facilitate the application of international students, McGill University provides corresponding reference standards for the degree system and scoring system of different countries. International students applying for a master's or doctoral degree at McGill University should meet the corresponding degree and achievement requirements. For example, Chinese students applying for a master's degree at McGill University should complete four to five years of undergraduate study and obtain a bachelor's degree. The minimum requirement for academic performance is GPA3.0/4.0 or above 80 points for a single subject. Chinese students who apply for a doctoral degree at McGill University should obtain a master's degree. The minimum requirement for academic performance is GPA3.0/4.0 or above 80 points for a single subject.

2) *Certificate of English language proficiency*: Students from countries and regions whose mother tongue is English or universities accredited by McGill University that teach in English do not need to submit certificate of English language. Students from other countries and regions need to submit language certificates recognized by McGill University. For example, TOEFL scores, iBT scores are the lowest 86 points and monomial scores are no less than 20 points, PBT score at least 567, IELTS (academic) 6.5 point with no monomial score below 6 point. These are the minimum requirements for English language proficiency at McGill University, and some majors have higher requirements for English proficiency. For example, the information research profession requires TOEFL, iBT scores of not less than 100 points, PBT not less than 600 points, and IELTS no less than 7.5 points.

The admission criteria of McGill University pay special attention to academic performance, which is the highest among Canadian universities, and the actual admission scores of many majors are higher than the minimum requirements of the university.

C. Education Subsidy

Most graduate students at McGill University can receive financial assistance, and the specific forms are divided into five main categories:

- Each student receives a postgraduate allowance, which is paid by the tutor through his own research fund.
- Scholarships and grants offered by universities, departments and majors at all levels are usually nominated by tutors or academic organizations. Some scholarships are awards to students with excellent grades.
- External funding provided by the federal government, the provincial government, and the private sector. Canadian students can apply for federal funding; students from Quebec can apply for funding in the province; international students also have funding from relevant institutions.

- Tuition remission. International students with excellent academic performance can receive a certain amount of tuition exemption in the first year of the master's degree and two years before their doctor's degree.
- Income from work. Postgraduates can earn wages by participating in internship projects, acting as teaching assistants or scientific research assistants.

III. TRAINING METHOD

A. Types of Students

Graduate students pursuing a master's degree at McGill University can be divided into: full-time students, who receive a minimum of 12 credits per semester; Half time students study, who study half the time of full-time students at school, two half-time semesters are equivalent to one full-time semester; part-time students take less than 12 credits per semester. Some master's degree programs are allowed to be completed on a half-time or part-time basis. According to whether it is necessary to complete the graduation thesis, it can be divided into master's degree (thesis) and master's degree (non-thesis), and non-thesis postgraduates in science and technology are also called applied master degree postgraduates.

Doctoral graduate students are divided into full-time and half-time study according to the time spent in school. According to the training methods, they are divided into civil law doctors, music doctors, philosophy doctors, joint training philosophy doctors, and successive postgraduate and doctoral programs of study.

The four types of students only study courses and do not obtain a degree ("Table I"):

TABLE I. STUDENTS WHO ONLY STUDY COURSES BUT NOT OBTAIN A DEGREE

Admitted students of master's degree)	Satisfy the application and admission requirements of the postgraduate admission office and selected departments Not admitted, but can be registered for postgraduate study Complete the undergraduate course per semester as required by the selected department (minimum 12 credits) The academic period is one year, if later admitted, credits cannot be included in postgraduate study.
Special students	Meet the minimum requirements for admission to postgraduate and post-doctoral degrees in selected faculties, and do not apply for degrees and certificates 1-2 postgraduate courses per semester (maximum 6 credits) A maximum of 12 credits If they are subsequently admitted to a higher degree, credits at this stage can be credited.
Diploma and certificate candidates	They are divided into full-time (not less than 12 credits per semester) and part-time (less than 12 credits per semester).
Visiting students	Postgraduate students enrolled in other universities to study at McGill University with the approval of both schools

B. Guidance Mode

1) *Providing multi-level academic consultation:* McGill University provides students with four levels of academic consult. Academic advisors of each department provide suggestions on academic regulations, major and minor choice, course registration, etc. throughout the year to help students solve problems in their study and life; The academic advisory offices of each department usually provide consultation during the course registration period or at specific times of the week and month, guide students to select courses according to their professional requirements, and provide information on scholarships, awards, research scholarships, inter-school exchange programs, etc. Academic advisers can also help students choose the most suitable professors or lecturers, guide students throughout the learning process, guide students to understand cutting-edge academic knowledge, recommend relevant reading materials, and share potential research opportunities; Some departments have student volunteers who serve as peer counselors, providing academic and non-academic assistance to students in lower grades.

2) *Supervising the entire learning process of postgraduate students:* Each teaching unit should have a clear procedure so that students can receive regular guidance and feedback in the process of learning and research (such as regular meetings, e-mail communication with mentors, attending seminars, and periodically checking the progress of learning, etc.). At least once a year, a meeting of students, tutors, steering committee or department representatives will be held to record and comment on the progress of the previous year and determine the learning objectives for the next year. The contents of the meeting will be recorded in the learning files of students as the basis for the evaluation of the follow-up report of research process for the next year.

3) *"Mentor plus steering" committee to guide:* About 70 percent of graduate students identify mentors at the application stage. The mentor is responsible for guiding the whole process of postgraduate study and research, cultivating research capabilities, determining research goals, guiding the writing of the thesis, cultivating the life and professional ability of the graduate students, and providing financial support to the students. When the academic field of the mentor cannot fully guide the research of students, it needs to be jointly directed with joint mentor. In addition to thesis mentors, doctoral students also have a steering committee to assist mentors in giving guidance and feedback during doctoral studies, and participate in the annual graduate research process tracking report meeting, and guide the graduate thesis writing.

4) *Serving as a teaching assistant and research assistant:* Postgraduates (master's and doctoral) can apply for teaching assistant or research assistant, which is a way for postgraduates to participate in scientific research training, and it is also a way to obtain financial support.

C. Assessment and Elimination System

Course learning evaluation of students is based on an alphabetical score, which should be at least B- for each course. Students who have obtained courses in other universities should have a score of not less than B- or a minimum of 65% according to the percentage system in order to pass.

If the course is not passed, the academic unit must instruct the student to resit, retake or change the course. If graduate students have failed in the two courses, or graduate research process tracking reports twice considered unqualified and the academic unit recommends that the student withdraw from school, or if a course fails and the postgraduate research process tracking reports that is found to be unqualified and the academic unit recommends that the student withdraw from school, the student will be required to drop out of school.

Doctoral students must pass a comprehensive examination or a series of corresponding examinations. The purpose of the examination is to examine whether the students have acquired the necessary knowledge and skills for doctoral research. The test results determine whether students can continue their doctoral studies. Examination forms include written examination, open-book extracurricular examination, extended research report, written research report, and oral examination and so on. If the comprehensive examination fails for the first time, students will have the opportunity to take part in the examination for the second time. Students will be required to drop out if they fail the second exam or fail to take the exam on time.

Students who are required to drop out of school can submit relevant materials for appeal within 30 days.

IV. COURSE SYSTEM

A. Course Structure

Courses are divided into thesis courses, compulsory courses, supplementary professional courses and elective courses. Elective courses are courses outside the training plan, students can choose according to their interests, but graduate students can only choose elective courses with the consent of the relevant professional leaders. Postgraduates should complete at least 45 credits. Doctoral students in some majors are required to study 1-2 languages other than English. Students are required to pass the language reading ability test or pass the two language courses at McGill University in the undergraduate stage.

Master of thesis project generally require 45-48 credits, of which thesis courses account for about 30 credits; compulsory courses are mostly seminars and laboratory experiments, accounting for about 10 credits; supplementary professional courses account for about 10 credits. The cultivation of thesis postgraduates mainly focuses on training their research ability. There are more courses of thesis, seminar and experiment, but fewer courses of knowledge, and some majors have only 6 credits.

Non-thesis postgraduate projects generally require 45-48 credits, and some require higher credits. A master's degree in nutrition certification and application training aspired to become a member of the Quebec Nutrition Association. The project requires students to complete a one-year preparatory course. After admission, complete 71 credits of compulsory courses (including 37 credits of practical projects and 1 credit of comprehensive nutrition exams), 9 credits of supplementary professional courses and 3 credits of elective courses. Non-thesis postgraduate programs aim to improve students' knowledge, practical ability and professional management ability in work, so knowledge courses account for a large proportion.

Doctoral students majoring in liberal arts usually take about 15 credits of professional courses (including compulsory courses and supplementary courses), while those majoring in science and engineering usually only have about 6 credits. Some majors do not require credits for courses, but all doctoral students in all majors have to complete discussion courses and doctoral comprehensive examinations.

B. Course Management

Course plans for the autumn and winter semesters are usually announced before academic guidance in March of this year, and for the summer semester in early February. In the course plan, the time, place, teachers and detailed information of the course should be listed.

The course number is based on the seven-digit numbering method. The first four digits indicate the starting class and the fifth one indicates the course level (1 and 2 are the junior grade courses, 3 and 4 are the senior grade courses, 5 are the courses for some fourth-grade undergraduates and postgraduate, 6 and 7 are the courses only for postgraduate), and the last two represent the course itself. Some seven-digit course numbers are followed by two characters to represent consecutive two-semester courses, non-consecutive two-semester courses, and continuous three-semester courses.

At the end of each semester, all elective students are required to log into the MERCURY online course evaluation system to evaluate the selected course. The evaluation helps the teaching unit to understand the teaching situation of the teacher, supervise the teaching work, and improve the teaching quality.

C. Course Evaluation

The course evaluation of McGill University adopts the combination of mid-term evaluation and final evaluation. The mid-term evaluation is usually conducted in the fourth or seventh week of each semester, in order to let teachers to understand the learning situation of students and make timely course adjustment. [4] There are various ways of evaluation. Teachers can set a questionnaire in myCourses platform or let students express their opinions anonymously. They can also let students spend one minute at the end of a class to complete an evaluation teaching problem, or students can make suggestions in groups.

V. CONCLUSION

Through the analysis of the postgraduate training model of McGill University, it can be seen that McGill University has a complete set of graduate management system, has strict and detailed regulations in the aspects of enrollment, curriculum setting and training methods, and pays attention to the cultivation of knowledge base and research ability of students which are the basis of both its enrollment requirements and curriculum setting; moreover, the University also cooperates with government agencies and qualification agencies to set up scientific and reasonable courses for application-oriented postgraduates, follows up the progress of postgraduates, and sets up early warning mechanism. These experiences and practices are worth of learning, in order to improve the training mode of graduate students in China.

REFERENCES

- [1] Graduate and Postdoctoral Studies Programs, Courses and University Regulations 2015-2016[EB/OL]. http://www.mcgill.ca/es/files/es/fall_2015_-_overview_by_level.pdf
- [2] Graduate and Postdoctoral Studies Programs, Courses and University Regulations 2015-2016[EB/OL]. <http://www.mcgill.ca/gradapplicants/apply/prepare/checklist/documents>
- [3] Graduate and Postdoctoral Studies Programs, Courses and University Regulations 2015-2016[EB/OL]. <http://www.mcgill.ca/gradapplicants/international/apply/proficiency>
- [4] Graduate and Postdoctoral Studies Programs, Courses and University Regulations 2015-2016[EB/OL]. <http://www.mcgill.ca/mercury/instructors/midcourse>.