



ANNUAL REPORT
2006-2007

MCGILL UNIVERSITY

FACULTY OF EDUCATION

**DEPARTMENT OF KINESIOLOGY
AND
PHYSICAL EDUCATION**

**SUBMITTED BY Greg Reid, Ph.D.
PROFESSOR AND ACTING CHAIR
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Section I - Description of Department of Kinesiology and Physical Education

- The **mission** is to generate, advance, and disseminate knowledge about human health and physical activity, and to prepare professionals to engage in related employment.
- The **objectives** of the Department of Kinesiology and Physical Education are:
 1. To respect the diversity of the disciplinary bases and professional practices associated with Kinesiology and Physical Education, to encourage interdisciplinary endeavors, and promote collegiality.
 2. To engage in the creation and evaluation of ideas and knowledge about health and human physical activity and to communicate outcomes in peer reviewed outlets, scholarly conferences, and seminars.
 3. To encourage graduate students to participate in, and share their ideas at, scholarly conferences, to publish their own research, and to become co-authors/presenters.
 4. To offer a curriculum which views human movement from social-cultural, psychological, and biological perspectives and to offer depth in selected areas.
 5. To encourage creative and critical thinking in students through a problem-centered curriculum of high relevance which fosters group-work and debate.
 6. To facilitate students becoming independent learners in acquiring and evaluating knowledge as they mature as scholars and professionals who value life-long learning.
 7. To employ technology to facilitate and enhance learning.
 8. To facilitate experiential learning through practical courses and field placements which place priority on “linking theory to practice”.
 9. To value and foster continuing education opportunities for alumni and current professionals.

➤ Major activities

The Department of Kinesiology and Physical Education (KPE) at McGill University offers two undergraduate degree programs; B.Ed. (Physical and Health Education) teacher preparation, and B.Sc. (Kinesiology). At the graduate level there is a M.Sc. degree with specialization in biomechanics or exercise physiology, and an M.A. degree with specialization in adapted physical activity, motor learning, pedagogy, or sport and exercise psychology. The Department is administratively located in the Faculty of Education, one of 13 faculties within the university.

Section II – Past year’s activities

Highlights

The 2006-07 year was a busy one for the Department of Kinesiology and Physical Education. All faculty members have external funding, from agencies across and beyond the tri-council fields of interest: CFI, NSERC, SSHRC, CIHR, NIH, REPAR, FRSCQ, FRSQ, and National Multisport-Montreal grants and contracts. This underscores the variance in the research expertise of Department faculty and the multidimensional nature of Kinesiology and Physical Education. Two professors, Drs. Tanja Taivassalo and Dilson Rassier received chercheur boursier awards from FRSQ, as well as CFI support in the competition results announced in June 2006.

In late August 2006, the Department lost the services of Chairperson Helene Perrault who accepted the position of Associate Provost (Planning and Budget). This necessitated Greg Reid re-assuming the role of Acting Chair for this year. A search for a full time Chair was initiated in September, interviews were held in March and April, and Dr Ted Milner was appointed in August 2007 and will join the unit January 1, 2008. In January we also hired a new student advisor, Nada Abu-Merhy, to replace Ana Chicoine who had resigned in December.

The Department was pleased to receive its first CRC Chair, Dr. Ross Andersen, who was appointed in March and joined the university in July. We continue to seek laboratory space within the Sport Complex for Dr. Andersen, Dr. Milner, Dr. Sabiston, a doctoral program, and designated student labs. The latter is critical because KPE will offer three of its courses in the new Physical Therapy and Occupational Therapy programs. This is an important step in closer collaboration with P & OT.

The Department hosted the second annual David Montgomery Memorial Walk/Run during Homecoming in October 2006. The money raised goes to the memorial fund in his name. The class of '07 also organized a final banquet for all KPE students which resulted in a \$1,500 donation to the fund. It is now large enough for graduate students to apply for the first Montgomery award (\$1,000) in fall 2007.

Robert Berry a member of the class of '49 also provided a \$20,000 gift to support two undergraduate students, one in Kinesiology and one in Physical and Health Education, for the next four years.

We also facilitated the annual Association of Physical Educators of Quebec conference in November with former Professor Jennifer Wall providing financial assistance for keynote speaker Dr David Kirk of England.

The Kinesiology undergraduate program (three variations) received accreditation from the Canadian Council of Physical Education and Kinesiology Administrators (CCUPEKA) and was also reviewed by CREPUQ.

In late April we organized a visit of Professor Masi to the Department's research and instructional labs, followed by a meeting with the Department of Athletics. This was designed to advance dialogue about issues of space within the Sport Complex, for KPE and Athletics. A KPE 'Science and Teaching Aspirations' document was submitted in August to the Associate Provost (Budget and Planning) who will continue to deal with this issue.

Three department members, Drs. Garcia, Perrault, and Reid were invited speakers at international conferences and newly appointed Dr. William Harvey was selected as a member of the Canadian Research Institute for Social Policy. Dr. Julie Côté had one of her posters selected for recognition at the Effort Congress of the European Society of Orthopaedics and Traumatology in Italy. Details of these accomplishments and editorial and reviewing services are found under Honours, Awards, and Prizes (**Appendix I**).

➤ **Teaching and Learning (undergraduate and graduate)**

▪ **Undergraduate**

B.Sc. (Kinesiology)

The first cohort of B.Sc. students (n=11) graduated from our Department at the May 2006 convocation and additional 31 in 2007. Convocation 2007 was also the final graduation of students (14) in the old B.Ed. (Kinesiology) program.

For several years we have had a goal of 60 newly admitted students per year. We were concerned with the low number of Kinesiology students, 28, who enrolled in September 2006 directly from CEGEPs or from out of province. While inter-faculty transfers increased this to 46 'new' students, we set an objective of determining and implementing means to improve our yield of kinesiology students. Early in the fall we met with the student affairs office of the Faculty of Education and

Mr. Howard Tontini, the marketing and planning director in the Admissions, Recruitment, and Registrar's office. One strategy was to communicate with all prospective students who inquired about B.Sc programs, informing them that a Kinesiology program existed in the Faculty of Education. This strategy was turned down by the Faculty of Science. However, we were able to place our Kinesiology brochures on the Science table at career fairs, had our students present at the McGill January Open House, sent notes of congratulations to all students accepted into Kinesiology, and organized a Department open house for them. August 2007 registration statistics indicate that we will welcome 14 U0 students and 60 U1 students, much improved over last year. Thus, it appears our strategies were effective and should be instituted again next year. We will also advertise the newly acquired CCUPEKA accreditation to ensure continue growth of this program.

B.Ed. (Physical and Health Education)

The B.Ed. Physical and Health Education program had 57 newly admitted students in September 2006, a number that clearly exceeds the MEQ quota of 40. This continues to cause difficulties in the department's capacity to appropriately meet the teaching requirements for our basic physical education pedagogical course (EDKP 342) and the 19 credits of physical activity courses. Quite simply, for physical activity classes (e.g. basketball or swimming), groups of 20 are pedagogically sensible as these courses are designed to promote personal skill acquisition and teaching abilities. As such, larger numbers of students reduces the feedback possible to individuals and in some circumstances exceeds equipment capacities. Moreover, our instructors of these courses, all of them part-time instructors, frequently mention their frustration of teaching 'large' numbers of students. From a cost perspective, accepting 60 students into this program therefore requires 3 groups of 20, rather than 2 groups of 20 if we accepted only 40. A 60 person cohort in this program is a relatively expensive enterprise, hence our desire to increase enrolment in Kinesiology and decrease enrolment in Physical and Health Education to 40. Elementary enrolment in the English schools of Quebec is beginning to decline, and hence moving toward the 40 new students per year, makes good sense as the number of students in Kinesiology increases.

These challenges notwithstanding, we reiterate CAPFE's very positive comments about this program from last year's annual report. CAPFE viewed the department's ability to link theoretical/academic courses with professional/pedagogical courses as a particular strength in comparison with similar programs across the province. This ability results from our department being responsible for teaching courses in both theoretical and professional clusters. In many universities, these clusters are the responsibility of two separate departments.

Cooperation with other teaching units at McGill and other institutions

The Department of Kinesiology and Physical Education (KPE), continues to deliver its undergraduate program in partnership with several other units within the Faculty of Education and the McGill community. KPE offers EDKP 332 for students in the Department of Integrated Studies in Education. In 2007-08 P & OT students will enrol in EDKP 206, Biomechanics of Human Movement creating a class of approximately 200. The instructor of the course, Dr. David Pearsall, will be teaching in Moot Court and with the help of the Department of Athletics we had identified shared space for 8 lab sections per week. The Dance Studio will house the labs, but we view this situation as temporary as the need to have a designated student laboratory remains a high KPE priority because some of the equipment should, quite literally, be bolted to the ground, which is difficult or impossible in a shared spot where equipment must be moved in and out for specific programs.

We continue to work with the School of Dietetics and Human Nutrition for joint teaching of the course EDKP 292 Nutrition and Wellness, and NUT 503 Bioenergetics and the Life Span. Dr. Turcotte was our department instructor for those shared courses.

In general, our graduate program offers courses every two years with the exception of EDKP 640. This is available annually in cooperation with the Department of Epidemiology. The cost is borne by KPE one year and Epidemiology the next.

Dr. Reid is co-supervisor of two PhD students in the special populations program of the Department of Educational and Counselling Psychology of the Faculty of Education and Dr. Dilson Rassier lectures in PHGY 502, Exercise Physiology.

A partnership with the Department of Anatomy is also on-going through Dr. Pearsall for the use of the Anatomy laboratory space and specimens for the EDKP 205 Structural Anatomy course.

Activities which support improvement of teaching skills for TAs, part-time instructors and professors

It is important to recognize that the purpose of the physical activity classes is to teach students how to transfer knowledge of general pedagogical principles and practices to a specific physical activity context, rather than solely to develop the student's physical performance in a given activity. Coordination between part-time instructors and the department was enhanced by a small committee three years ago which produced a handbook for part-time instructors to ensure the better integration of theoretical and practical course content and to standardize teaching approaches. For example, professors in Physical Education Methods (EDKP 342), the first pedagogical course, set the stage for teaching principles and lesson planning that should be reinforced by the part-time instructors responsible for the physical activity courses. The part-time teaching handbook is distributed to all part-time teachers in the Department. We held a meeting with our part time teachers in September to discuss these issues and well as review policies on absenteeism and grading. In addition, a meeting was held in April with full- and part-time instructors of our professional courses to ensure consistency of key issues across certain courses, but to avoid unnecessary duplication.

Quality of teaching

Examination of undergraduate and graduate course evaluations over the last academic year reveals average scores to range between 3.7 and 4.7 for full-time academic staff; between 3.1 and 4.7 for part-time instructors teaching theory and physical activity courses. It appears that there exists a consistent high quality of instruction across both theoretical and practical courses. Yet, we must remain vigilant to the needs of part time instructors, who may not see how their course fits into the broader program, and who would likely benefit from discussion with a full time member of staff with regard to teaching expectations and techniques. This is dealt with by the part time instructor's handbook and the yearly meeting with the Chair and the part time instructors. We would like to have these teachers visited once while teaching each semester by a full time member of staff. Unfortunately, we have not been able to achieve this.

Significant contributions made by part-time and auxiliary staff

Part-time instructors are responsible for many courses in the KPE portion of the B.Ed. degree. They teach 62% of the credits in that program. This is due to the high component of physical activity courses which are taught by part-time instructors with teaching experience in the specific physical activity. While they are not full time, the reality is that they have the necessary expertise and most teach the KPE course(s) on a yearly basis. Thus, while part-time, they are very integral to the program and we attempt to create a sense of KPE community with them. On the other hand, 64% of B.Sc. Kinesiology credits were taught by full-time academic staff. The part-time instructors' contribution in the Kinesiology program lies mainly in courses for which skill expertise or practical experience in physical fitness assessment and supervision is required.

➤ Research

New Hires

Dr. Catherine Sabiston, a health psychologist, was hired to replace Dr. Todd Loughead who left McGill for the University of Windsor. Dr. Sabiston began January 1, 2007 after completing a post doctoral appointment in psychosocial dimensions of oncology. She already has two master's students under her wing.

Dr. Ross Andersen, John Hopkins School of Medicine joined the Department as CRC Chair on July 1. He began immediately on a CFI grant to develop a lab for his research on obesity.

We continue to engage in informal discussion with Dr. Richard Riopelle of the Department of Neurology and Neurosurgery. Neuroscience and kinesiology have obvious links and a senior person, possibly a CRC, could develop a vibrant clinical program that would assist both Departments and the University.

Laboratory Re-organization

Laboratory space within the Seagram Sport Science Centre is now fully occupied by Drs. Taivassalo, Rassier, Stapley, Bloom, Reid, Turcotte, and Pearsall. Conversation with the Department of Athletics, the Provost, and Dean of Education resulted in the beginning of a master science and teaching plan for KPE, being developed by the Chair of KPE for the Associate Provost (Planning and Budget). This document, 'Teaching and Science Aspirations' justifies and specifies new laboratory space for Dr. Andersen, Dr. Sabiston, Dr. Milner, Dr. Garcia, and doctoral students. Also critical is designated student lab space. In 2006-07 the student lab was moved into shared space (Rm 301) with a section of the Sport's Medicine Clinic, half of the floor space for each function. This did not prove to be satisfactory for delivering of services by the Clinic nor for the student labs which were seriously constrained by the size of the area. This would have been exacerbated next year when EDKP 206 is offered for the P & OT students. As noted, we will attempt to resolve these problems in 2007-08 by sharing a much larger space with Athletics. Schedules have been modified so that the space will be used by KPE at sometimes, and Athletics at other times. This will be accomplished however by KPE moving some of our equipment in and out of the area, a practice that is not a solution in the long run.

Academic Staff Research Funding - Kinesiology and Physical Education (Appendix II)

Two members of staff, Rassier and Taivassalo, secured CFI- Leader's Opportunity Fund support in June 2006.

The total amount of peer-reviewed funding received by the **11 department academic staff members** as Principal or Co-Investigator was \$5,042,358 with funds from NSERC (\$218,700), SSHRC (\$121,778), and CIHR (\$813,431). Other significant contributions were CFI (\$1,485,051) and Health Canada (\$1,991,000). Contracts and Grant-In-Aids were received from the Centre National Multisport (\$80,748). All full-time academic staff remain externally funded. We have significantly increased our research funding from \$1,380,536 (2004-05) to \$2,099,322 (2005-06) to \$5,042,358 (2006-07).

Publications & Professional Activities - (Appendix III and IV)

Appendix III is a list of publications and professional activities for each faculty member. The journals in which we publish, like the journals for which we review, reflect the enormous breadth of kinesiology; for example, *Brain*, *Journal of Neurophysiology*, *Journal of Sport and Exercise Psychology*, and *Focus on Autism and Developmental Disabilities*.

Appendix IV is a compilation of the various products of our scholarship. The total number of refereed publications and presentations has risen to 81 from 52 last year. Since our grant success has been very good in the last couple of year, the number of publications and presentations are likely to increase in the next few years as labs and research programs develop and expand.

Graduate Student Funding (Appendix V)

Graduate Student funding is shown in Appendix V. The total funding of \$284,720 is a slight increase over last year's figure. As can be seen, the majority of graduate student support is provided through research assistantship from professors' grants. This year, four students were successful in obtaining an external fellowship to support their program of study, Julie Newin (FRSQ), Julie Robillard (NSERC), Karen Lamond (IRSST), and Jason Fuller (NSERC).

As more and more universities, particularly those in Ontario develop guaranteed funding, we will find it difficult to attract the best possible candidates unless McGill is able to respond accordingly.

Institutional, local, national and international collaborations

Academic staff members continue to contribute to national and international scholarly activities with presentations in several forums. Research collaborations extend to various departments within McGill; with Dr. Scott Delaney, Faculty of Medicine exploring psychological aspects of recovery from sport concussions; Dr. J. Bourbeau from the Departments of Medicine and Respiratory Epidemiology as a research collaborator for the Clinical Exercise Physiology research program in COPD with Drs. Perrault and Taivassalo; Dr. J. Fung from the School of Physical and Occupational Therapy working with Drs. Côté and P. Stapley; and Dr. Anouk Lamontagne from P & OT has a project with P. Stapley; Dr. E. Fombonne from the Department of Psychiatry and Dr. E. Gisel from the School of Physical and Occupational Therapy collaborating on autism-related research work with Dr. G. Reid; Dr. Maureen Simmonds and Dr. Sophie DeSerres of the School of P & OT with Dr. Julie Côté; Drs. Shoubbridge and Karpatis of the MNI with Dr. Tanja Taivassalo who is now an Associate Member of the Neuromuscular Research Group and Dr. Jean Bourbeau of the Montreal Chest Hospital; Dr. Peter Grutter from the Department of Physics and Dr. Basil Petrof (Meakins-Christie Labs) are collaborators with Dr. Rassier; Dr. Marcelo Wanderley of the Faculty of Music with Dr. Côté; Drs. Margaret Cargo, Department of Psychiatry and Dr. Catherine Grey-Macdonald of the School of Dietetics obtained a new SSHRC grant on healthy lifestyle and youth with Dr. Enrique Garcia; Drs. Grizenko (Douglas Hospital) is a co-applicant on a SSHRC grant received by Dr. Harvey.

Collaborations also extended to other Montreal and Quebec Institutions as Dr. J. Côté and P. Stapley are members of the Centre de Recherche Interdisciplinaire en Réadaptation (CRIR) and collaborate with several researchers at the Université de Montréal such as Dr. T. Drew (Physiologie), Dr. Debbie Feldman (Institut de Réadaptation), and Dr. Francois Prince (Département de Kinésiologie). Dr. R. Boushel from Concordia University (Exercise Science) is also an adjunct professor in KPE and a research collaborator of H. Perrault. Dr. François Maltais from the COPD research laboratory at Hôpital Laval, affiliated to the Université Laval (Québec city), is also a collaborator on a multicenter study on exertional dyspnea in COPD with Dr. H. Perrault. Dr. Côté is working on two projects with Dr. Sameena Iqbal, a nephrologist at the Montreal General Hospital, with Dr. N. Vezina at UQAM on ergonomics, and Dr. Nancy St-Onge at Concordia in whip-lash associated disorders. Dr. Pearsall also works with Dr. Iqbal on a research project. Dr. Taivassalo has initiated collaboration with Dr. Yan Burelle (U de M) who also studies mitochondrial function as well as Drs. Yves Joanette and Louis Bherer of the CRIUGM (Centre de Recherche, Institut Universitaire de Geriatrie de Montreal). Dr. William Harvey has received grant support for his ADHD research as well as youth physical fitness research in collaboration with Dr. Fern Delamere (Concordia) and Dr. James Gavin (Concordia).

Dr. Catherine Sabiston is part of research teams at the University of Montreal, Concordia, Ste Justine, UQAM, and Ville Marie Oncology Centre.

National collaborations include Dr. Rassier with Dr. Walter Herzog of the University of Calgary on molecular memory in myosin and mechanism of strain induced ATP kinetics and force production. Dr. Todd Loughhead of the University of Windsor is working with Dr. Gordon Bloom on two SSHERC funded projects, one on aggression in ice hockey and another on team building for youth sport coaches, and Dr. Bloom also holds a grant with Drs Phil Sullivan (Brock) and Nick Holt (University of Alberta) on youth coaching. Dr. Philip Wilson of Brock University is co-investigator with Dr Enrique Garcia on a SSHERC grant exploring relatedness as a factor explaining physical activity behaviour. Dr. Garcia is also working with Dr. John Spence of the University of Alberta on a number of papers on physical activity and children and is collaborating with Dr. Rashid Ahmed, University of Waterloo. Dr. Bloom collaborates with Dr. Rob Shinke, Laurentian University on coaching and team building. Dr. Reid pursues on-going research collaboration on children with movement coordination difficulties with Dr. M. Bouffard (U. of Alberta) on a SSHRC-supported research grant. Dr. Harvey was one of 17 new Ph.D.'s selected as part of a New Investigator Network, Canadian Research Institute of Social Change centred at the University of New Brunswick. Dr. Sabiston's research connections extend to University of Laval, UBC, University of Calgary, U of Saskatchewan, UPEI, UNB, University of Toronto, University of Waterloo, and University of Alberta.

Internationally, Dr. Perrault continues collaborations with Dr. B. Aguilaniu, an adjunct professor at the HYLAB Laboratoire de physiopathologie de l'Exercice in Grenoble, France, on several projects related to exercise intolerance mechanisms in COPD. Dr. Julie Côté is also a member of a multicenter international study on the prediction of outcome following acute whiplash injury coordinated by the University of Queensland, La Trobe University and the University of Iceland. Dr. Stapley is working with Dr. Lena Ting of Georgia Tech on the design and construction of a moving platform requested in his successful CFI grant. Dr. Stapley continues to write articles with Dr Jane Macpherson, Oregon Health and Science University, on post doctoral projects and has initiated projects with Jean Blouin and Laurence Mouchnino (CNRS and Université de la Méditerranée). Dr. Taivassalo continues her links with Dr. Ron Haller, University of Texas, on factors controlling capillary formation in muscle of mitochondrial patients, and with Dr Ben Levine of the same university on effects of bed rest on muscle dysfunction. Dr. Taivassalo is also working with colleagues at the University of Newcastle-upon-Tyne on the effects of endurance and resistance exercise training on mitochondrial mutation levels in patients with human mitochondrial disease. Dr. Garcia has initiated work on physical activity promotion with Dr. Pedro Iturrioz and Dr. Benat Amenabar in Spain, and Dr. Bloom has ongoing collaborations with Dr. Wade Gilbert of California State University on coaching and team building. Dr. Sabiston's work included researchers at Purdue University, Chinese University of Hong Kong, and East Carolina University.

➤ **Involvement in the community**

- The department maintains close links with the Association of Physical Educators of Quebec (APEQ) and is actively involved in hosting and contribution to the annual meeting of the association, usually in the fall. Drs. Bloom, Harvey, and Garcia sit on the executive of APEQ as McGill representatives
- At the APEQ meeting on November 2006, the Department welcomed Dr. David Kirk, well known researcher and Dean from the United Kingdom delivered the third Jennifer Wall annual lecture on maintaining the physical in physical education. This was made possible due to the generous support of former staff member, Professor Jennifer Wall.
- Dr. Bloom holds executive positions with the Dollard baseball and hockey associations and is a consultant to those groups.
- Please see the full list of consultation in **Appendix VI**.