RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

Name and Title: Becky Chen, Professor
Department: Applied Psychology and Human Development

TITLE OF RESEARCH PROJECT: The International Bilingual Education Project

Number of 299Y Spots: 4
Number of 399Y Spots: 1

OBJECTIVES AND METHODOLOGY:
Dynamic assessment is a form of assessment that adopts an active teaching process aimed at modifying cognitive functioning. Dynamic assessment may be particularly important in the context of French immersion education because children have low levels of French proficiency at the beginning of an immersion program and they do not receive formal instruction in English. Therefore, the conventional, static assessment tools lead to low levels of performance and fails to distinguish between typically developing and at-risk readers. This project is funded by Social Sciences and Humanities Research Council of Canada and has received the ethics approval from the REB of University of Toronto. The goals of the present project include:

1. To design and evaluate dynamic assessment (DA) tools for early identification of at-risk readers in French immersion programs.
2. To provide timely, cost-effective interventions to at-risk readers via evidence-based computer games.

DESCRIPTION OF STUDENT PARTICIPATION:
We look for students who are interested in literacy research. The ability to speak and read French is highly valuable but not required as many tests are given in English. Students will work very closely with me and my graduate students. Students will receive training for data collection and collect data in GTA schools. Under our supervision, students will learn to enter, code, and analyze data with computer software such as EXCEL and SPSS. Students will also help with literature search and manuscript writing. They will have opportunities to present their work at lab meetings and professional conferences.

MARKING SCHEME (assignments with weight and due date):
Project work 35%, continuous, including training, data collection, analysis, lab meetings, etc.
Written outline of Poster presentation 10%, due December 15, 2018
Poster presentation 15%, March 2020, due at Undergraduate Research Forum
ROP journals 40%, 1 submission every two weeks

Project Code: LTE 3
NAME AND TITLE: Becky Chen, Professor

DEPARTMENT: Applied Psychology and Human Development

TITLE OF RESEARCH PROJECT: Successes and Challenges of Syrian Refugee Children in Canada: Language, Literacy and Well-Being

NUMBER OF 299Y SPOTS: 4 NUMBER OF 399Y SPOTS: 1

OBJECTIVES AND METHODOLOGY:
The goal of this longitudinal project is to examine language, literacy, and well-being of Syrian refugee children. Forty families of Syrian refugees were recruited into the project two years ago and have been tested twice (once per year). This will be the third time point in our study. Both parents and children participate in the study. Parents and children who are nine years and above fill out questionnaires that examine their well-being. Parents also fill out questionnaires for children who are below nine years of age. All children receive a battery of language and literacy measures in both English and Arabic (discourse skills, word reading, vocabulary, reading comprehension, etc.). Data is collected through family and school visits. Family visits will be conducted in teams of 2-3 students, with each team under the supervision of an experienced graduate student. This project is funded by Social Sciences and Humanities Research Council of Canada and has received the ethics approval from the REB of University of Toronto and the Toronto District School Board.

This research seeks to answer the following questions:
- How are Syrian refugee children coping with school and life in their new country?
- How are they developing language and literacy skills in English and Arabic?

DESCRIPTION OF STUDENT PARTICIPATION:
We look for students who are interested in research on language, literacy, and mental health. The ability to speak and read Arabic is highly valuable. However, because many tests are given in English, students who do not speak Arabic are also encouraged to apply. Students will work very closely with me and my graduate students. Students will receive training for data collection and collect data in the GTA. Under our supervision, students will learn to enter, code, and analyze data with computer software such as EXCEL and SPSS. Students will also help with literature search and manuscript writing. They will have opportunities to present their work at lab meetings and professional conferences.
MARKING SCHEME (assignments with weight and due date):

Project work 35%, continuous, including training, data collection, analysis, lab meetings, etc.
Written outline of Poster presentation 10%, due December 15, 2018
Poster presentation 15%, March 2020, due at Undergraduate Research Forum
ROP journals 40%, 1 submission every two weeks
Name and Title: Dr. Todd Cunningham, Assistant Professor, Teaching Stream
Department: Applied Psychology and Human Development, OISE

TITLE OF RESEARCH PROJECT: Understanding Student and Teacher Perspectives of Assistive Technology

Number of 299Y Spots: 1  Number of 399Y Spots: 1

OBJECTIVES AND METHODOLOGY:
Assistive Technology (AT) has been identified as any technology that can assist or improve the functional capabilities of individuals with a disability (Wissick & Gardner, 2008), and has been deemed a critical component of the inclusion (Edyburn, 2006; Zhou, et al., 2012) and academic success of students with learning disabilities (LDs; Maor, Currie & Drewry, 2011).

The purpose of this study is to examine the various factors affecting student use and uptake of computer-based assistive technology (AT) tools and products. For example, academic self-concept, hardware or equipment, software used and frequency of use, perception of technology, perception of support, and social perception will be measured in students. It also seeks to understand teacher perceptions of computer-based assistive technology tools and products in order to examine the impact of these perceptions on student use in the classroom. The implication of this research is that it will provide a systematic examination of student perceptions of AT in order to give researchers and teachers a deeper understanding of AT use in the regular classroom and how student perceptions may affect the use and uptake of new AT. It will also include students with LDs in the conversation about the AT that is being assigned to them and help stakeholders to understand how AT can most effectively improve students’ learning outcomes.

This mixed methods research design involves surveying both students with and without LDs, as well as teachers to understand their perceptions of AT use. Following data collection some participants will be asked to participate in interviews in order to gain a deeper understanding of perceptions of AT.

DESCRIPTION OF STUDENT PARTICIPATION:
This project is for dedicated and motivated students who are interested in gaining valuable research skills and experience in the area of assistive technology evaluation. Students will be expected to spend approximately 10 hours a week working in the lab (or on lab-related tasks). Students are considered to be full members of the laboratory and will have the opportunity to participate in a number of ways:
1. Students will engage in literature review and discussions regarding Assistive Technology and Special Education.
2. Students will attend and participate in regular lab meetings.
3. Students will help develop and carry out evaluation studies of different assistive technology
   a. Have the opportunity to learn new assistive technology tool
   b. Develop a measure on how to compare several products that comprise assistive technology tool
      (i.e. voice recognition, grammar assistant, organization programs)
   c. Students will learn how to use a number of software analysis tools in the lab (PRAAT, AUDACITY, Google Cloud Natural Language API)
4. Students will also help in the larger scale evaluation of the assistive technology selection tool ATSelect.org with educators and clinicians.
   a. Learn how to administer questions
   b. Learn how to conduct structure interviews
5. Students will assist with data entry and statistical analysis.
   a. Will learn how to use SPSS
6. Students will gain training in effective scientific communication (e.g., writing research reports, preparing data for publication, and oral presentations).

MARKING SCHEME (assignments with weight and due date):

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<td>30%</td>
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Name and Title: Dr. Todd Cunningham, Assistant Professor, Teaching Stream
Department: Applied Psychology and Human Development, OISE

TITLE OF RESEARCH PROJECT: Verification Study of the Microsoft Immersive Reader

Number of 299Y Spots: 2 Number of 399Y Spots: 2

OBJECTIVES AND METHODOLOGY:

Goal: Evaluate change in reading comprehension scores of students with Specific Learning Disorders when using Microsoft Immersive Reader

Microsoft (MS) has enhanced the available assistive technology tools through their Learning Tools. Assistive technology (AT) is any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities. One of the main AT in the Learning Tools is the Immersive Reader. The Immersive Reader builds on MS traditions of using AT to support individuals with reading challenges.

On the MS Learning Tools website (https://www.onenote.com/learningtools), the claim is that the Immersive Reader is able to “Improve Reading Comprehension” skills through:

- Increasing Fluency of English language learners or readers of other languages
- Helping to build confidence for emerging readers learning to read at higher levels
- Offering text decoding solutions for students with learning differences, such as dyslexia

The evaluation of the impact of the Learning Tools on reading comprehension will be carried out through 3 step process with one identified population. As students with SLD represent the largest group who receive special education services, the SLD population would be the initial group.

- Phase 1: Validation of Individual Assistive Technology Tools in the Immersive Reader.
- Phase 2: Understanding how the integration of tools within the Immersive Reader impact reading comprehension of SLD students.
- Phase 3: Integration of Immersive Reading in the Classroom.

From the knowledge gained in the first two phases, the Immersive Reader will be evaluated within the classroom. Grades 6 to 8 classes in sixteen different schools will be represented in the study. In the grades 6 to 8...
classes, students who have SLD that impacts their reading will use the Immersive Reader. A waitlist control model will be used in which four schools will start using the Immersive Reader for four months while the remaining schools will not use it. After four months all groups will be provided with the Immersive Reader.

Students and teachers will be provided training on how to use the Immersive Reader including how to get e-text in, the desirable settings (phase 1 and 2), and how to troubleshoot issues that may arise. Students’ academic self-concept, views of AT, perceptions of the effectiveness of the Immersive Reader, reading comprehension, and teachers’ reports of reading performances will be evaluated in all of pre-post-following time points.

The outcomes of the phase 3 study will provide insights as to whether students and teachers find Immersive Reader to be effective in helping them or their students with everyday reading in addition to gauging any changes in reading comprehension over time. It is hypothesized that when the students possess the tools with the right settings, they will feel better about their ability to engage in learning (higher academic self-concept), will rate AT as a useful tool for them, and rate the Immersive Reader as an effective tool. With ongoing use of the AT increases in reading comprehension are also expected. The Immersive Reader’s positive impact on students will also be expressed by teachers.

**DESCRIPTION OF STUDENT PARTICIPATION:**
This project is for dedicated and motivated students who are interested in gaining valuable research skills and experience. Students will be expected to spend approximately 10 hours a week working in the lab (or on lab-related tasks). Students are considered to be full members of the laboratory and will have the opportunity to participate in a number of ways:

1. Students will engage in literature review and discussions regarding Assistive Technology and Special Education.
2. Students will attend and participate in regular lab meetings.
3. Students will have the opportunity to assist with data collection and participant recruitment.
   1. Students will learn how to develop report with a child
   2. Students will learn how to administer, and score standardize and experimental measures along with use E-Prime
4. Students will assist with data entry and statistical analysis.
   1. Will learn how to use SPSS
5. Students will gain training in effective scientific communication (e.g., writing research reports, preparing data for publication, and oral presentations).

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Name and Title: Dr. Michel Ferrari  
Department: Applied Psychology & Human Development

TITLE OF RESEARCH PROJECT: Wise Life Management Among Iranian Immigrants and Syrian Refugees

Number of 299Y Spots: 2

OBJECTIVES AND METHODOLOGY:
Every year Canada actively seeks immigrants to bolster the country's declining population and meet its economic goals and refugees on humanitarian grounds. However, many new immigrants and refugees who arrive to Canada struggle to acculturate; others, however, do very well. What contributes to the ability of some immigrants to achieve a good quality of life in Canada? Our study is a SSHRC-funded project which explores whether personal wisdom (mediated by coping style) contributes to more successful life management in Iranian immigrants and Syrian refugees to Toronto; both groups can potentially draw on a shared heritage of Islamic wisdom that is misunderstood, even stigmatized, by some Canadians. Our research project has three overarching objectives: (1) to characterize the situated nature of Islamic wisdom, at the intersections of culture, age and gender, as related to life management; (2) to study how Islamic wisdom manifests through effective coping with obstacles to life management, and to quality of life generally, among immigrants and refugees; and (3) to improve the coping skills and life management of new Iranian immigrants and Syrian refugees. Wise Life Management is an ongoing project with 4 phases. We are currently finalizing the first phase of the project and planning to recruit ROP students for the second phase which explores the relationship between wisdom and life management through: (1) a general interview about coping associated with life management and (2) a semi-structured 1-month audio diary and follow-up interview.

DESCRIPTION OF STUDENT PARTICIPATION:
Since the project targets Syrian refugees and Iranian immigrants, the ROP students will assist in translating questionnaires and related material from English to Arabic (for the Syrian refugee participants) or from English to Farsi (for the Iranian immigrant participants), ideally, they must be a native speaker of either Arabic or Farsi with excellent skills in listening, speaking as well as in reading and writing in those languages. For the Arabic language, we will require a student familiar with the modern standard Arabic; furthermore, priority will be given to Arab-speaking students familiar with the Syrian culture as they will be more familiar with the specific needs of the target participants. However, since ROP students will also get practical experience in qualitative and
quantitative research by assisting in coding translated interviews with Farsi and Arab-speaking participants, non-Arabic and non-Farsi speaking students can also apply. The ROPs will be participating in monthly meetings with the project collaborators and graduate students to discuss the development of the second phase of the project. They also have the opportunity to learn to work with the survey questionnaire Qualtrics used for developing surveys and interpreting data.

MARKING SCHEME (assignments with weight and due date):
30% Data transcription for Phase 1
Data analysis for phase 1 will continue during the first 6 months of the second phase of the project, and ROP students will collaborate in tasks such as coding, data entry and transcription. This will provide students with a first exposure to research study steps and is planned to be done by February. ROP students are expected to maintain a positive relationship with graduate assistants and inform them about their progress at weekly meetings.

20% Data analysis
During the same time period, in addition to supporting design and coordination of a large-scale project, ROP students will be involved in helping graduate students with the analysis of the results from phase 1 of the project using SPSS software.

40% Interviews
Between February to April, ROP students will be helping graduate research assistants to devise and hold interviews with Iranian and Syrian refugees about their coping strategies. Some participants might not be familiar with English, therefore, ROP student will help with translating from Farsi or Arabic into English. They are required to have good command of the languages both in comprehension and production.

10% Scientific communication
In early March, ROP students will have the opportunity to present their works through poster presentation at the Undergraduate Research Forum (March 2020). Prior to this date, the ROP students involved in the wise life management project will do a poster presentation for lab members to receive their feedback for further improvement.
RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

Name and Title: Dr. Michel Ferrari
Department: Applied Psychology & Human Development

TITLE OF RESEARCH PROJECT: Scope and Frames of the Science of Wisdom

Number of 299Y Spots: 2

OBJECTIVES AND METHODOLOGY:
How do we study wisdom? The scientific study of wisdom has seen significant growth in the past 30 years. However, the last comprehensive review of the extent research programs studying wisdom empirically and their findings was conducted by Richard Trowbridge in 2005. Since that time, new labs and research paradigms have emerged on the scene, as well as new measurement tools and strategies. A systematic review, which commenced in 2018, is to update the Trowbridge review with the new research programs and findings that have emerged in the 13 years since, creating a more accurate picture of the ways in which wisdom is conceptualized, measured, and connected to other psychological constructs.

DESCRIPTION OF STUDENT PARTICIPATION:
Students participating in this project will have an excellent opportunity to develop their skills in the scholarship and theoretical aspects of research. In participating in this project, students will have the opportunity to:
1. Participate in regular lab meetings, engaging in discussion of ongoing projects, exchange of ideas, and research logistics.
2. Work closely with graduate students in the lab to receive further direction and mentorship.
3. Be involved in a comprehensive review of the empirical literature of the scientific study of wisdom, assisting with the construction of comprehensive database of empirical studies of wisdom.
4. Develop critical writing and reasoning skills through the preparation of written reports, which may be refined further into publishable manuscripts with ROP participants as co-authors (depending on extent of contribution).
5. Learn to use software for thematic analysis (QSR NVivo), and for referencing publications (EndNote).

MARKING SCHEME (assignments with weight and due date):
Professionalism (10%)
Professionalism includes behaviours that are expected of an undergraduate student working in a research lab. These include, but are not limited to, reliability (e.g., punctual for meetings and task deadlines), collegiality (e.g.,
respectful and considerate of others), appropriate verbal and electronic communication, and preparedness for meetings.

**Journal of Research Activities (20%)**
On a weekly basis, students will make written entries into an ongoing reflection journal. Within these journal entries, students will (1) document their research activities for that week, (2) reflect on the personal significance of these activities and (3) record any questions or confusions that arise. The journal is due on April 1 by 11:59pm (single spaced, 12-point font, Times New Roman).

**Performance on Research Project Tasks (20%)**
Students will be evaluated on the quality of their work. Examples of tasks include, but are not limited to, the development of coding schemes and surveys, participant recruitment, narrative coding, database entry, data analysis, and literature reviews.

**Interim Report (10%)**
Students will summarize their Journal of Research Activities in a two-page Interim Report that is due on November 15 by 11:59pm (single spaced, 12-point font, Times New Roman). Students will attach their Journal of Research Activities up to that point as an appendix. In response, participants will receive a written assessment containing formative feedback from Dr. Ferrari or a senior graduate student.

**Literature Review and Bibliography (20%)**
Students will produce a written literature review (8-10 pages) and bibliography (6-7 pages) on a topic relevant to the lab’s research program (double spaced, 12-point font, Times New Roman, APA style). The literature review should be based on the most important articles included and the bibliography will include additional relevant articles not cited in the literature review. The exact topic will be determined in collaboration with the research team. Literature reviews are due on December 1 by 11:59pm. Note: Your literature review may be presented to the lab as a discussion piece, if ongoing research tasks would benefit from it. This will be decided on a case-by-case basis.

**Poster Presentation (20%)**
Sometime in March, ROP students will showcase their ongoing work to the Wisdom & Identity Lab in the form of an academic poster presentation. Presentations will provide students with an opportunity to practice skills relevant to scientific communication in psychology (e.g., conveying complex ideas, responding to questions). Posters will be subsequently presented at the Undergraduate Research Forum (March 2020).
RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

Name and Title: Dr. Michel Ferrari
Department: Applied Psychology & Human Development

TITLE OF RESEARCH PROJECT: Personal Wisdom Projects

Number of 299Y Spots: 1 Number of 399Y Spots: 1

OBJECTIVES AND METHODOLOGY:
The objective of the study is to examine the relationship between wisdom, construed as the integration of cognitive, affective, and reflective capacities (Ardelt, 2003), self-transcendence (Levenson et al., 2005), and personal projects. Personal projects are a series of interrelated acts reflecting an individual's traits, intended to achieve a certain state, usually analyzed with an emphasis towards the environments that sustain them (Little, 1983, 2016). The study will collect data from Mechanical Turk. Participants will complete the Personal Projects Analysis Workbook (PPAW; Little, 1983), the Three-Dimensional Wisdom Scale (3D-WS; Ardelt, 2003), and the Adult Self-Transcendence Inventory (ASTI; Levenson et al., 2005). Structural equation modelling will be used to determine relationships between types of personal project, or types of engagement with personal projects, to wisdom and self-transcendence.

DESCRIPTION OF STUDENT PARTICIPATION:
Students will assist in conducting reviews of the literature, building the survey on Qualtrics and Mechanical Turk, and qualitative coding of the results of the Personal Projects Analysis Workbook, focusing on category creation and thematic analysis.

MARKING SCHEME (assignments with weight and due date):
Professionalism (10%)
Professionalism includes behaviours that are expected of an undergraduate student working in a research lab. These include, but are not limited to, reliability (e.g., punctual for meetings and task deadlines), collegiality (e.g., respectful and considerate of others), appropriate verbal and electronic communication, and preparedness for meetings.

Journal of Research Activities (20%)
On a weekly basis, students will make written entries into an ongoing reflection journal. Within these journal entries, students will (1) document their research activities for that week, (2) reflect on the personal significance
of these activities and (3) record any questions or confusions that arise. The journal is due on April 1st by 11:59pm (single spaced, 12-point font, Times New Roman).

**Performance on Research Project Tasks (20%)**
Students will be evaluated on the quality of their work. Examples of tasks include, but are not limited to, the development of coding schemes and surveys, participant recruitment, narrative coding, database entry, data analysis, and literature reviews.

**Interim Report (10%)**
Students will summarize their Journal of Research Activities in a two-page Interim Report that is due on November 15 by 11:59pm (single spaced, 12-point font, Times New Roman). Students will attach their Journal of Research Activities up to that point as an appendix. In response, participants will receive a written assessment containing formative feedback from Dr. Ferrari or a senior graduate student.

**Literature Review and Bibliography (20%)**
Students will produce a written literature review (8-10 pages) and bibliography (6-7 pages) on a topic relevant to the lab’s research program (double spaced, 12-point font, Times New Roman, APA style). The literature review should be based on the most important articles included and the bibliography will include additional relevant articles not cited in the literature review. The exact topic will be determined in collaboration with the research team. Literature reviews are due on December 1 by 11:59pm. Note: Your literature review may be presented to the lab as a discussion piece, if ongoing research tasks would benefit from it. This will be decided on a case-by-case basis.

**Poster Presentation (20%)**
Sometime in March, ROP students will showcase their ongoing work to the Wisdom & Identity Lab in the form of an academic poster presentation. Presentations will provide students with an opportunity to practice skills relevant to scientific communication in psychology (e.g., conveying complex ideas, responding to questions). Posters will be subsequently presented at the Undergraduate Research Forum (March 2020).
Name and Title:  Dr. Michel Ferrari  
Department:  Applied Psychology & Human Development  

TITLE OF RESEARCH PROJECT:  Coping Wisely with Adversity  
Number of 299Y Spots:  1  

OBJECTIVES AND METHODOLOGY:  
Wisdom can be conceptualized as the understanding, intention, and application of critical life events to aid optimal development in self and others. Recently, research has found that wisdom is related to post-traumatic growth (PTG). Models of PTG suggest that early success in coping or how cognitively engaged one is with the crisis is essential for growth. This research project seeks to determine the mechanisms that explain the relationship between PTG and wisdom. It is hypothesized that PTG has two indirect pathways to wisdom: (1) positive coping styles and (2) meaning-making. Trauma narratives will be collected from approximately 350 participants between the ages of 18-29 through online survey software. Participants will be asked to identify the most stressful or traumatic event that has occurred in their life. Coping and meaning-making will be assessed using behavioural and self-report data. The narratives will be coded based on type of coping (e.g., adaptive vs. maladaptive) and presence and degree of meaning made. Participants will also complete questionnaires on coping, meaning in life, wisdom, PTG, and traumatic life events.  

DESCRIPTION OF STUDENT PARTICIPATION:  
The ROP students that will be matched with this project will be responsible for helping with participant recruitment, data entry and analysis, and preparation of presentations/papers related to this topic. The ROP students will assist with narrative coding of the trauma narratives provided by participants and data analysis of the questionnaire data through SPSS (training will be provided). In addition, students will get experience helping with writing research reports and preparing data for publication or presentation at conferences.  

MARKING SCHEME (assignments with weight and due date):  
Professionalism (10%)  
Professionalism includes behaviours that are expected of an undergraduate student working in a research lab. These include, but are not limited to, reliability (e.g., punctual for meetings and task deadlines), collegiality (e.g., respectful and considerate of others), appropriate verbal and electronic communication, and preparedness for meetings.
Journal of Research Activities (20%)
On a weekly basis, students will make written entries into an ongoing reflection journal. Within these journal entries, students will (1) document their research activities for that week, (2) reflect on the personal significance of these activities and (3) record any questions or confusions that arise. The journal is due on April 1 by 11:59pm (single spaced, 12-point font, Times New Roman).

Performance on Research Project Tasks (20%)
Students will be evaluated on the quality of their work. Examples of tasks include, but are not limited to, the development of coding schemes and surveys, participant recruitment, narrative coding, database entry, data analysis, and literature reviews.

Interim Report (10%)
Students will summarize their Journal of Research Activities in a two-page Interim Report that is due on November 15 by 11:59pm (single spaced, 12-point font, Times New Roman). Students will attach their Journal of Research Activities up to that point as an appendix. In response, participants will receive a written assessment containing formative feedback from Dr. Ferrari or a senior graduate student.

Literature Review and Bibliography (20%)
Students will produce a written literature review (8-10 pages) and bibliography (6-7 pages) on a topic relevant to the lab’s research program (double spaced, 12-point font, Times New Roman, APA style). The literature review should be based on the most important articles included and the bibliography will include additional relevant articles not cited in the literature review. The exact topic will be determined in collaboration with the research team. Literature reviews are due on December 1 by 11:59pm. Note: Your literature review may be presented to the lab as a discussion piece, if ongoing research tasks would benefit from it. This will be decided on a case-by-case basis.

Poster Presentation (20%)
Sometime in March, ROP students will showcase their ongoing work to the Wisdom & Identity Lab in the form of an academic poster presentation. Presentations will provide students with an opportunity to practice skills relevant to scientific communication in psychology (e.g., conveying complex ideas, responding to questions). Posters will be subsequently presented at the Undergraduate Research Forum (March 2020).
RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

Name and Title: Patricia Ganea, Associate Professor
Department: OISE (Applied Psychology and Human Development)

TITLE OF RESEARCH PROJECT: Language Development in Infancy and Early Childhood

Number of 299Y Spots: 2

OBJECTIVES AND METHODOLOGY:
The objective of this project is to examine young children’s language development, including their ability to learn novel words, to predict upcoming linguistic input, to understand the communicative intentions of the speaker, and to use language to revise their existing knowledge. We also examine the relation between children’s inhibitory control, vocabulary, working memory and language development. We use a variety of methodologies and standard experimental techniques developed in our lab. The studies are conducted in our lab, at daycares and the Ontario Science Centre, and involve participants ranging in age from 18 months to 10 years of age.

DESCRIPTION OF STUDENT PARTICIPATION:
We would like to fill these positions with students who have a strong interest in research methodologies, good interpersonal, communication, organizational skills, and experience working with children. Students will participate as Research Assistants, and will be trained in critical aspects of developmental research. They will conduct relevant literature reviews, collect data by helping recruit participants and run experiments, record results, and conduct data analyses using statistical software. Students will be trained on all relevant methods and tasks. Students will also attend and participate in monthly lab meetings. They will have the opportunity to work closely with graduate students, and they will be involved in all aspects of research in the lab. By actively participating in research going on in the lab students will have the opportunity to develop their own research skills and interests. By the end of the course, students will have developed the ability to read and critically analyse research in developmental psychology, identify and use appropriate methods for investigating a research question of interest, and present their own research in both written and oral formats.

MARKING SCHEME (assignments with weight and due date):

1. Lab participation and journal (50%): ongoing
• Students will assist with research and administrative tasks in the lab for a total 10 hours/week (e.g., recruiting participants, coding and inputting data, assisting with testing participants).
• Students will read and discuss articles relevant to the projects in the lab.
• Students will write one journal entry per week focused on critical insights on their in-lab experiences related to developmental research.
• Students will attend and contribute to regular lab meetings, typically once per month.
• A detailed rubric is provided for lab participation and journal.

2. Lab meeting presentation (20%): February 2020 (exact date TBA)
   • Students will create and present a poster based on a research project they have contributed to.
   • Presentations will take place during a lab meeting in preparation for the Spring 299Y Undergraduate Research Forum in early March.
   • Posters and presentations will be evaluated by senior lab members.

3. Article Assignment (30%): due late March 2020 (exact date TBA)
   • Students will write a 6-page paper, selecting from one of the following:
     a) Literature review: choose 4-5 research articles that are looking at the same area of research relevant to the Ganea lab. Write a critical analysis of the relationship between them and assess the importance of their contribution.
     b) Article comparison: choose two articles that are looking at the same area of research relevant to the Ganea lab. Compare their methodology, results, and conclusions.
     c) Research design: choose an article describing a piece of experimental research and design a follow-up study.
RESEARCH OPPORTUNITY PROGRAM
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Name and Title: Patricia Ganea, Associate Professor
Department: OISE (Applied Psychology and Human Development)

TITLE OF RESEARCH PROJECT: Science Learning and Reasoning In Young Children

Number of 299Y Spots: 3

OBJECTIVES AND METHODOLOGY:
The objective of this project is to examine young children’s science learning, including the ability to learn and transfer newly acquired scientific information to the real world, as well as the development of scientific reasoning skills. We are interested in methods that increase children’s understanding of science concepts (such as camouflage and gravity) through different forms of media (such as picture books, videos, etc.) and by using hands-on activities. We also study the development of scientific experimentation and reasoning skills (such as control of variables strategy and counterfactual thinking). The studies are conducted in our lab, at daycares and the Ontario Science Centre, with children from 4 to 8 years of age.

DESCRIPTION OF STUDENT PARTICIPATION:
We would like to fill these positions with students who have a strong interest in research methodologies, good interpersonal, communication, organizational skills, and experience working with children. Students will participate as Research Assistants, and will be trained in critical aspects of developmental research. They will conduct relevant literature reviews, collect data by helping recruit participants and run experiments, record results, and conduct data analyses using statistical software. Students will be trained on all relevant methods and tasks. Students will also attend and participate in monthly lab meetings. They will have the opportunity to work closely with graduate students, and they will be involved in all aspects of research in the lab. By actively participating in research going on in the lab students will have the opportunity to develop their own research skills and interests. By the end of the course, students will have developed the ability to read and critically analyse research in developmental psychology, identify and use appropriate methods for investigating a research question of interest, and present their own research in both written and oral formats.

MARKING SCHEME (assignments with weight and due date):

1. Lab participation and journal (50%): ongoing
• Students will assist with research and administrative tasks in the lab for a total 10 hours/week (e.g., recruiting participants, coding and inputting data, assisting with testing participants).
• Students will read and discuss articles relevant to the projects in the lab.
• Students will write one journal entry per week focused on critical insights on their in-lab experiences related to developmental research.
• Students will attend and contribute to regular lab meetings, typically once per month.
• A detailed rubric is provided for lab participation and journal.

2. Lab meeting presentation (20%): February 2020 (exact date TBA)
   a. Students will create and present a poster based on a research project they have contributed to.
   b. Presentations will take place during a lab meeting in preparation for the Spring 299Y Undergraduate Research Forum in early March.
   c. Posters and presentations will be evaluated by senior lab members.

3. Article Assignment (30%): due late March 2020 (exact date TBA)
   • Students will write a 6-page paper, selecting from one of the following:
     a) Literature review: choose 4-5 research articles that are looking at the same area of research relevant to the Ganea lab. Write a critical analysis of the relationship between them and assess the importance of their contribution.
     b) Article comparison: choose two articles that are looking at the same area of research relevant to the Ganea lab. Compare their methodology, results, and conclusions.
     c) Research design: choose an article describing a piece of experimental research and design a follow-up study.
RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

Name and Title: Jennifer Jenkins, Atkinson Chair of Early Childhood Development & Education
Department: Applied Psychology and Human Development

Lab Website: https://jennifermjenkins.com/

TITLE OF RESEARCH PROJECT: Identifying and Targeting Potential Paths by Which Parents’ Emotional Repertoires Shape Their Child’s Regulatory Functioning

Number of 299Y Spots: 2 Number of 399Y Spots: 1

OBJECTIVES AND METHODOLOGY:
Our Developmental Psychopathology Lab will be conducting a study identifying and targeting potential paths by which parents’ emotional repertoires shape their child’s regulatory functioning. One component of this study will be a meta-analysis, which include developing a search strategy, reviewing articles, extracting data, analyzing data, and writing up results. Another component of the position will be observational coding of video-taped mother child interactions. Students will be trained on an observational coding system designed to assess the emotion regulation skills and capacities of both children and parents when engaged in a joint interaction. Students will be trained on this system and will be required to code interactions on an ongoing basis and meet with graduate students when there are discrepancies in coding.

DESCRIPTION OF STUDENT PARTICIPATION:
Students will play an active role in coordinating this meta-analysis. Roles will include: conducting literature reviews to determine a search strategy; reviewing abstracts yielded from large data base search; and coding and abstracting data from studies that have met inclusion criteria. Students will also have the option of assisting with data analyses and manuscript writing. In addition, students will be responsible for coding 5-minute video-taped mother child interactions to assess parent-child emotion regulation.

We are seeking students who are extremely organized and detail-oriented, have a background and interest in developmental psychology, and have strong communication skills and an interest in research translation. Through this work, they will develop their research skills including their ability to conduct systematic searches, read, understand and critically analyze research articles, synthesize evidence, and write for both academic and popular audiences. We expect students to work 10 hours per week (240 hours maximum) and attend biweekly lab meetings.
MARKING SCHEME (assignments with weight and due date):

COURSE REQUIREMENTS
1. Journal - or another mode of documentation of progress agreed upon with the professor
2. Meetings - bi-weekly (at least) with ROP supervisors, and record dates and times in the journal.
3. Attend any demonstrations, orientations, etc., that the supervisor may require. Special modules focused on bibliographic searching and citation practices, accessing the map and data library, and developing archival research skills are available at Robarts Library, upon request of faculty supervisors.
4. The supervisor will complete a written assessment of the student’s progress and discuss it with the student BEFORE THE DEADLINE FOR DROPPING COURSES WITHOUT PENALTY.
5. Students will participate in the Spring 299Y/399Y Undergraduate Research Forum

MEANS OF EVALUATION and MARKING SCHEME (Please describe for both terms the various means of evaluating student progress and providing feedback in relation to the research project; include specifically the role of the faculty supervisor in this evaluation, assignments with weight and due date; no ONE assignment may be worth more than 50%).

<table>
<thead>
<tr>
<th>Journal and/or documentation of research process</th>
<th>Marking Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annotated Bibliography (Nov)</td>
<td>10%</td>
</tr>
<tr>
<td>Critique of an empirical paper (Jan)</td>
<td>10%</td>
</tr>
<tr>
<td>Policy Brief Piece (March)</td>
<td>20%</td>
</tr>
<tr>
<td>Participation (meta-analysis and observational coding throughout)</td>
<td>40%</td>
</tr>
<tr>
<td>ROP FORUM Presentation (April)</td>
<td>20%</td>
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ROP Assignment 1: Annotated Bibliography Due: November 6, 2019

Objectives:
1. Learn how to efficiently use scholarly sources (e.g. PsycInfo, UofT library, Google Scholar) to obtain relevant academic research articles.
2. Learn the purpose of an annotated bibliography.
3. Learn how to write a concise summary of research findings then can then be used as an organization tool to then write on a research topic.

Guidelines: Follow this link to learn what an annotated bibliography is: http://advice.writing.utoronto.ca/types-of-writing/annotated-bibliography/

Select a topic that is relevant to the broad area of “Developmental Psychology” and a policy audience. Some themes might be:

- How should we train and support early childhood educators?
- Why does maternity/paternity leave matter?
- How should we support immigrant/low-income/disadvantaged families?
• What supports are most important for children with developmental delays?
• How do we prevent mental health problems?
• What are important targets of parenting interventions?

We encourage you to choose a topic related to your own interests.

Use various scholarly sources to find 5 relevant research articles from the past 5 years that are applicable to your assigned research topic. Write a one paragraph summary (no more than half a page) on each of the articles. The paragraph must include a summary of the findings as well as a critical analysis of its value and relevance to the topic.

ROP Assignment 2: Critique of an Empirical Paper Due: January 27, 2020
Objectives:
1. Summarize research findings concisely
2. Critically evaluate a study by discussing its strengths and weaknesses
3. Reflect on how a study fits within existing knowledge/literature in the field of developmental psychology
4. Think creatively about future areas of research that can expand on current findings

Guidelines:
Write a one-page (single spaced, 12pt font) critical reflection paper on one of the research articles you identified in the annotated bibliography. This should be an in-depth analysis that includes the following sections:
• A brief synopsis of the study.
• A description of the study’s methodology.
• A discussion of the strengths of the article and what it adds to the existing literature/knowledge on this issue
• A discussion of the limitations of the research study and how it could be modified to make it stronger (e.g. sample size, type of design, different measures)?

ROP Assignment 3: Policy Brief Due: March 1, 2020
Objective:
1. Practice identifying the key takeaways from research articles
2. Translate academic information for policy audiences (e.g., changing vocabulary and style of writing)
3. Practice concise and clear communication

Guidelines: Follow this link to learn how to write a policy brief:
https://www.idrc.ca/sites/default/files/idrcpolicybrieftoolkit.pdf

Write and format a one-page policy brief for someone in the Ministry of Health, Ministry of Education, or Ministry of Family and Social Services who needs to make an informed policy decision about an issue related to the topic you have chosen for your previous assignments. This person does not have much background in this
area, does not have much time, and needs good recommendations based on reliable evidence (multiple studies or a meta-analysis). The brief should be visually appealing and easy to read.
Name and Title: Dr. Kang Lee
Department: Applied Psychology & Human Development

**TITLE OF RESEARCH PROJECT:** Bias Intervention

**Number of 299Y Spots:** 1

**OBJECTIVES AND METHODOLOGY:**
We are interested in observing children's attitudes toward people from different racial backgrounds. For instance, whether children would prefer to play with peers from the same ethnic background rather than those from different ethnic background. We are also interested in examining how we can reduce children's negative biases against peers from different ethnic backgrounds and increase interracial friendships.

For this study, a researcher will guide child participants through a number of short computerized tasks using a tablet. In one task, participants will be asked to view pictures of Black people and White people, and touch either smile logo or frown logo according to the instructions. In another task, students will listen to several scenarios and be asked to make a choice. The scenarios all happen in children’s daily life. Then, child participants will play a game that teaches them how to recognize individuals from different racial groups.

**DESCRIPTION OF STUDENT PARTICIPATION:**
We expect our lab students to be dedicated, reliable, and proactive. ROP students will be assigned to one research project and will devote most their time to that project. However, students may assist other projects in the lab as well.

Students will participate in lab meetings, recruit participants, run experiments, conduct literature reviews as well as data entry/coding/analysis. Students will be trained on all relevant methods and tasks involved in their project (ie. SPSS, fNIRS).

**MARKING SCHEME** (assignments with weight and due date):

50% - Performance and participation in the lab – throughout the school year until the end of April
- Students are expected to devote 10 hours per week on lab activities with a requirement of contributing at least 1 weekend day to OSC testing.
- Students are expected to show commitment, reliability, professionalism, and competence in lab tasks
• Students can expect regular check-ins with their supervising graduate student regarding their performance in the lab

25% - Reflection Paper -Due early December
• Students will submit a 2 to 3-page report documenting their participation in the lab, their activities on the research project as well as any feedback, research ideas the student developed from working on the project, and challenges and solution that they have encountered.

25% - Research Project and Poster Presentation - Due end of March
• Working with a graduate student and fellow ROP students, you will conduct independent research related to your assigned project. You will report your findings through an academic poster. You will present the poster at a lab meeting as well as the annual Undergraduate Research Forum in March.
Name and Title: Katreena Scott, Associate Professor, Canada Research Chair
Department: Applied Psychology and Human Development

TITLE OF RESEARCH PROJECT: Safe and Understood Research Assistant: Intervening with Families to Promote Healthy Child Outcomes and Prevent Abuse Recurrence for Young Child Victims of Domestic Violence Exposure

Number of 299Y Spots: 2

OBJECTIVES AND METHODOLOGY:
Exposure to domestic violence is one of the most frequently substantiated forms of child maltreatment experienced by Canadian children (Trocmé, Fallon, MacLaurin, Sinha, Black, Fast et al., 2010). Recently released data from the Ontario Incidence Study finds that domestic violence accounts for almost half (48%) of cases substantiated by child protective services, which in Ontario translates to approximately 20,500 cases per year (Fallon, 2015). As with other forms of maltreatment, very young children experience disproportionately high levels of victimization (Gjelsvik, Oftedahl & Pearlman, 2003). Moreover, because infants and toddlers are more often in the presence of their mothers than older children, their exposure experiences are more likely to be direct (i.e., witnessing violence) as opposed to indirect (i.e. hearing or knowing about violence) (Fantuzzo et al., 1991; Kitzmann, Gaylord, Holt & Kenny, 2003). There is ongoing need for better treatment services to for young children and their families. Such services need to both end abuse and able promote health and well-being among young child victims of violence exposure (MacMillan et al., 2009; Gordon, Oliveros, Hawes, Iwamoto & Rayford, 2012; Strug & Wilmore-Schaeffer, 2003).

The ROP’s selected for this project will become involved in a rigorous, applied cluster randomized trial of the impact of embedding within child protection two promising, community-based interventions for reducing impairment and preventing abuse recurrence in young child victims (0 to 4) of exposure to domestic violence. The first intervention (Mothers in Mind) aims to promote the social, emotional and developmental health of young child who have been exposed to intimate partner violence. A trauma-informed approach acknowledges the impact of violence and trauma on people’s lives and focuses on client safety and empowerment and on increasing maternal sensitivity. The second intervention, Caring Dads, will engage fathers in group settings to develop positive parenting skills, break cycles of violence, and support children’s healing and development.

Primary outcomes for the cluster randomized trial are re-referral to child protection and child social and emotional development, as reported by multiple informants. In addition, we are following families over three
assessment points to gain a better understanding of trajectories of development. Our assessment includes parent-reports of child and family functioning, observations of mothers and fathers in interaction with their children and in a co-parenting interaction, as well as task-based and eye-tracker measures of children’s developing emotional regulation and neuropsychological functioning.

**DESCRIPTION OF STUDENT PARTICIPATION:**
We have a vibrant research lab of students at varying levels of graduate and undergraduate training. Most of the graduate students are completing their training in clinical psychology. Other are studying child development or educational psychology. Undergrads come from a range of backgrounds including psychology, biology, economics and health sciences.

Students involved in this ROP opportunity will become involved in our ongoing study of parenting interventions. They will be assigned a specific responsibility (e.g., coding father-child interaction, examining psychophysiological data) and will have the opportunity use related data to propose and examine questions relevant to our study.

Depending upon level of experience, ROP students may also be trained to attend intervention groups as part of recruitment efforts, conduct interviews with child protection workers, or work as a member of a team with a more senior student to conduct assessments of mothers, fathers and young children.

* ROP students will not be involved in the first method of recruitment but have, occasionally, been sufficiently skilled, trained, and experienced to take part in the second form of recruitment, which involves attending intervention groups as an observer, often for the first and last few weeks of the group as recruitment is taking place.

**MARKING SCHEME (assignments with weight and due date):**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of meetings, progress, what was learned about the project</td>
<td>15%</td>
<td>(due end of each term)</td>
</tr>
<tr>
<td>Attendance and participation in lab meetings</td>
<td>10%</td>
<td>(Fridays, 1 to 2:30)</td>
</tr>
<tr>
<td>Competence and reliability in assigned lab tasks</td>
<td>20%</td>
<td>(assigned each term)</td>
</tr>
<tr>
<td>Presentation of question and literature review in lab meeting</td>
<td>20%</td>
<td>(late November)</td>
</tr>
<tr>
<td>Poster prepared for the 299 Undergraduate Research Fair</td>
<td>35%</td>
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</table>