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

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):

- 30% Participation in lab work Ongoing
- 20% Lab meeting presentations (4) Two each term
- 20% Final project proposal December 13, 2019
- 30% Final project report April 3, 2020
RESEARCH OPPORTUNITY PROGRAM
299Y/399Y PROJECT DESCRIPTIONS 2019-2020
FALL/WINTER

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).

MARKING SCHEME (assignments with weight and due date):

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Assignment</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>30%</td>
<td>Participation in lab work</td>
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<tr>
<td>20%</td>
<td>Final project proposal</td>
<td>December 13, 2019</td>
</tr>
<tr>
<td>30%</td>
<td>Final project report</td>
<td>April 3, 2020</td>
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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).
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>
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<tbody>
<tr>
<td>Annotated Bibliography (Nov)</td>
<td>10%</td>
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<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/](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.