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**Name of Researcher**

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**Department/Faculty**

Psychology

**Position in Department/Faculty**

Instructor

**Project Title**

Categories or Relationships? Cross-cultural Differences in Categorization

**Term of Project**

Spring 2020, Summer 2020 and Fall 2020

**Please introduce yourself – include pertinent background information relating to the topic of your research project.**

I completed my PhD in cognitive and behavioural neuroscience at the University of Waterloo, Ontario, before moving to British Columbia to teach at Langara College. My PhD work focused on the study of memory and attention.

**Please discuss your educational background and your work experience that led you to taking on this research project. If possible, include a quote that helps define your interest in this project.**

I became interested in the study of culture and cognition after completing training in interculturalism at Langara College. This training opened my eyes to the cultural variety in thinking and communication styles. I began to look for research on culture and cognition, and while there is extensive research comparing American and East Asian students, there is very little study on students from India. With the increase in international students from India at Langara College, it seemed an excellent opportunity to begin to study how students from India approach cognitive tasks.

**Please explain the concept for your project in terms that others not in your field would understand, like an executive summary.**

Do people from different cultures think differently? Previous research suggests the answer is yes. Research comparing European Americans to East Asian participants suggests that methods for dealing with contradiction, reasoning styles, and categorization of objects, among others, are all affected by culture (Nisbett, 2003). In particular, one study indicates that whereas European Americans are likely to categorize objects based on taxonomic categorization (similarity of attributes, properties), East Asians are more likely to use thematic categorization (relationships among objects). While there has been extensive research comparing the thinking styles of Chinese and European American students, there is relatively little looking at Indian students. The goal of this project was to determine if Indian students categorize objects based on taxonomic or thematic categorization. How we categorize is a reflection of how we organize our world. This research is the first that we know of that compares categorization styles between East Asian, European Canadian, and Indian participants.

**Identify goals and objectives for the project, and how the results may be used, perhaps to solve a problem, or to inform further research in that field.**

Intercultural misunderstandings are often ascribed to problems in language proficiency, but this misses a

much larger picture. Recognizing the ways in which culture affects how we understand and organize our world is key when working in intercultural environments.

Research in cross-cultural differences in cognition can be applied to any intercultural environment, but, as an educator, I am most interested in applications to educational settings. For example, do categorization styles affect how students approach multiple choice questions or organize textbook content?

I hope for this study to be the first in a series that demonstrates different cognitive styles in Indians, East Asians, and European Canadians and to use the information to benefit not only our students, but our educational institution as a whole.

#### **Briefly explain the steps taken to conduct the project research, and the results found.**

After obtaining ethical approval and RSAF-1 funding, we began data collection. Participants were recruited by asking instructors to advertise the study through email and/or Brightspace. European Canadians, Chinese, and Indian students interested in participating in the study were directed to a Survey Monkey link. Students completed a categorization task and answered questions regarding demographics, academics, and language preferences and proficiency.

The categorization task contained lists of three items and students were asked to indicate which two of the three were most closely related. As an example, consider the three items cow, grass, and lion. Choosing cow and grass would indicate a thematic categorization (as cows eat grass), whereas choosing cow and lion would indicate a taxonomic categorization (as cows and lions are both animals). The task contained 13 target items and 19 filler items.

In our first study, participants completed the task in their native language (English, Chinese, or Hindi or Punjabi). Results showed that the Indian students were more likely to use taxonomic categorization than both the European Canadians and Chinese students, who did not differ.

In our second study, all participants completed the task in English. Results showed that Indian students were more likely to use thematic categorization than the European Canadians. There were no differences between European Canadian and Chinese students, or Chinese and Indian students.

The results suggest that Indian students categorize objects differently than European Canadians, though the method is highly dependent on the language the items are presented in. In addition, the results suggest that European Canadian and Chinese students do not differ in their categorization style, regardless of language.

#### **Who else was involved in this project? How did their involvement help? ie: other faculty, students, community partners**

Two students from my Spring 2019 cognitive psychology course were recruited to participate in the research. Both of them supported the research from the beginning stages (literature review, ethics application) and continue to work on the project. They thus helped every step of the way, from conception to dissemination.

#### **What were/are you hoping to get from conducting this research?**

The study of culture and cognition is a fascinating but little explored research area. I hope this project will contribute to this growing area of research.

We plan to present this research at conferences, such as the Western Psychological Association 2021 conference, and publish this work in a peer reviewed journal.

#### **Can you share any personal stories that made this research experience memorable/valuable?**

Originally, we had participants complete the study in person at Langara College in the Spring 2020 semester. When COVID-19 protocols required campus to close, we quickly switched gears and decided to try an online study. This was my first time completing a study online, but it worked incredibly well and we likely were able to obtain a larger sample size than we would have obtained with in-person data collection.

#### **Do you have any tips/suggestions/ideas for applying this research in your field? Or for others in their fields? Or for conducting future research of this kind?**

There are still many areas of cognition I wish to explore in European Canadian and Indian students. For

example, how does culture affect reasoning style? How might that affect how we learn? As very little research has been conducted comparing Indian and European Canadians, the possibilities feel endless.

**Any final comments? What are the “next steps” for this project? And for you?**

The next step is to share this research through conferences and publication. Subsequently, I hope to find funding for future studies in this area, though I have not decided on the specific direction I will take the research.

**Please upload any images that will help to showcase your project.**

- [Culture-Cognition-Research-Team.jpg](#)