Proceedings
Knowledge Integration
Symposium 2017-2018

INTEG 420: Senior Research Projects
Department of Knowledge Integration
April 4, 2018
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A Message from the Department of Knowledge Integration

Welcome to the Knowledge Integration Senior Research Symposium Proceedings! In the pages that follow, you will find a collection of papers representing the breadth and depth of scholarship of the Class of 2018 during their 4th year Senior Research Project courses.

The Senior Research Project is the two-term culmination of the Knowledge Integration undergraduate program. It provides our students the opportunity to demonstrate the ability to make connections across disciplines and to engage in integrative research that addresses a topic drawn from their particular areas of concentration. Students identify a topic and faculty supervisor early in their final year of studies. We are grateful to the many individuals from across campus, as well as from outside the university, who have generously offered to supervise these students.

A scan through the table of contents will give you a sense of the rich diversity of interests of our students. As you’ll see, these projects enhance our understanding of real-world issues (and in some cases how we might address them). Students have accomplished this by analyzing existing knowledge, generating new and useful data, developing evidence-based recommendations, and creating new tools that others can use.

Just as impressive as the breadth of scholarship represented here is the depth you will find as you read these short summaries of their eight-month senior projects. You are welcome to contact the authors if you wish to further explore their projects by reading their full theses, reports, or manuscripts. Whether you choose to dig deeper into one or more of these extraordinary projects, or content yourself with a perusal of the abstracts, I am sure you will come to understand why we in Knowledge Integration are comfortable asserting that what makes KI students special is that they make connections that others often don’t, and see solutions that others often can’t.

Finally, on behalf of everyone in the Department of Knowledge Integration, I extend my heartfelt congratulations to the Knowledge Integrators of 2018. You have done yourselves, your friends and family, and your program proud! We wish you the very best in your future endeavors.

Dr. John McLevey
Assistant Professor, Knowledge Integration, University of Waterloo


Identification and Effective Communication of Knowledge Integration Program Strengths

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Abstract - Knowledge Integration (KI) is a unique undergraduate program hosted at the University of Waterloo. Similar to a traditional Arts & Sciences program, KI offers interdisciplinary education and a community of like-minded learners. More than other Arts & Sciences programs, though, KI’s unique degree structure allows students to customize their specializations while providing them with a core set of courses that teach valuable design and collaboration skills. Current students, staff, and faculty understand the strengths this brings as an interdisciplinary education, but how best to communicate these strengths to an audience of prospective 17-year olds remains an open question.

To answer this question, I took a two-step approach to analyzing KI’s recruitment messaging. First, I completed an environmental scan of the KI program, designed to improve the understanding of how different stakeholders at the University of Waterloo viewed the benefits KI provides students. Out of the scan, I identified eight distinct program strengths. Then, I designed a survey to test messaging and the relative importance of these strengths among prospects. The survey was administered to 98 fall 2018 applicants to Knowledge Integration. Survey responses were critically compared with the environmental scan results to identify connections with stakeholder viewpoints. The results of this analysis will contribute to the continued improvement of KI’s recruitment messaging.

I. Introduction

Housed in the Environment Faculty at the University of Waterloo, Knowledge Integration (KI) is a unique Arts & Sciences program that combines interdisciplinary problem solving with design thinking. As a young program, KI is always looking for ways to improve what it communicates with prospective students. What are the strengths about KI that make it a better fit for students than similar programs? Do these strengths resonate with students who are considering the program? How can KI better communicate these strengths through its recruitment messaging?

A KI degree can appeal to a broad audience: it offers the flexibility to design one’s education while at the same time grounding learning in practices of collaboration and design thinking. It is a program for students who have lots of interests and do not want to sacrifice any in pursuing a university degree, or for those who want to combine their interests in a way that isn’t readily available in a traditional university program. KI provides driven learners exactly what they need for a diverse learning experience in a community full of equally passionate individuals.

The goal of this project is to understand the language and messaging that describes the program strengths. Through an in-depth environmental scan, including interviews with key stakeholders and a review of the current material available to prospective students, I identified the important program strengths that KI offers its students. From there, I built a survey for all fall 2018 KI applicants and asked them to evaluate these program strengths and that language used to convey them.

A 2015 survey of KI graduates showed that a remarkable 96% felt the program helped them achieve their goals. Clearly, the alumni understand and appreciate the value of KI. The goal for this project is to take all the parts of KI that go into that...
96% success rate and identify better ways to communicate them to the target audience in order to attract a greater number of strong applicants.

II. Methods

To analyze the benefits that KI provides students, the project was broken down into two parts. First, an environmental scan comprising interviews, background research, and program strength synthesis was conducted. Second, a survey was developed, targeted at fall 2018 KI applicants. I made connections between the findings from each area to discuss the recruitment messaging in KI.

In the environmental scan, interviews were conducted over a month-long period, with stakeholders who held different positions at Waterloo: current KI students, KI faculty and staff, and Marketing & Undergraduate Recruitment staff. Each of these groups provided different perspectives regarding the KI learning goals, its position within the Waterloo ecosystem, and the experiences students get while they are part of the program.

Alongside the interviews, I conducted a review of existing KI recruitment information: websites, University and program brochures. I also reviewed competing programs, including other interdisciplinary and Art & Science degrees with similar program structures to KI. Many of the KI competitors are Arts & Science degrees, at universities such as McMaster, Guelph, Windsor and McGill. Each of these programs offers a similar type of interdisciplinary degree to KI, though program structure and delivery varies.

With the results of the environmental scan, I reviewed the interviews and research to compile the eight key program strengths we used to structure the survey (Fig. 1) evaluating the effectiveness of recruitment messaging.

I designed the survey to ask respondents to reflect on the identified program strengths and several test statements used to communicate them. For each program strength, respondents were asked to read and rank four statements from 1 to 4, for their ability to convey the particular strength (see, e.g., Fig 2). A final question asked respondents to select the top 5 program strengths that were important to them. The goal of the survey was to better understand how respondents who had not begun post-secondary education would value the program strengths and interpret the different recruitment messaging.

Due to the scope of the project, I was unable to administer the survey with the desired target audience: prospective applicants. Instead, the survey was administered to 98 students who had already applied to KI for fall 2018. This survey population may not be representative of the eventual target population, and this needs to be considered in interpreting the results. The survey was constructed using Qualtrics and distributed by Waterloo’s Registrar’s Office via email. Over a two-week period, respondents were contacted at three different intervals encouraging them to participate. We received 38 responses from applicants who completed the entire survey (we ignored 11 more partial responses), there was a response rate of approximately 40%.

<table>
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<th>Mean Ranking of Program Strength Statements</th>
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<td>2.08</td>
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<tr>
<td>1.97</td>
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Figure 1: The program strengths that resulted from the environmental scan. The strengths are accompanied by the mean rankings (from 1-4) from each statement (A-D) in the survey.
III. Results

The results I received from the environmental scan and the survey proved promising, and addressed my goals for this project.

In terms of the environmental scan, the feedback I received in the interviews influenced a collection of program strengths that represented KI (Fig. 1). Each program strength speaks to an element of KI that offers a tangible benefit to students. The strengths represent all areas of student experience in KI and provide a strong case for what makes the program successful.

Having this clear set of program strengths was a fantastic start, but far from the analysis I wanted regarding how prospective students would receive recruitment messaging. The survey is where the connections were made between the audience I was targeting and the strengths I compiled.

The survey results were split into two areas, the comparison of program strengths and the strength-specific questions.

Three clear strengths resonated with survey respondents (Fig 3). The strengths of Degree Flexibility, Small Community, and Learning to Solve Real World, Complex Problems scored highest with 92%, 76%, and 71% of respondents selecting them in their top five. All other strengths, with the exception of one, scored between 40% and 60% in terms of importance to respondents. The

Figure 2: A sample of a program strength question used in the survey, the applicant survey had eight similar questions, each focused on statements that communicate particular program strengths.

Figure 3: The program strengths that respondents selected as the most important factors that influenced their application to KI. Respondents were able to choose up to five answers.
one strength that only 32% of respondents found important when applying to university was “Successful Outcomes after Graduation”.

The other half of the survey looked at individual program strengths and asked respondents to rank test statements 1 to 4, in terms of which they felt best communicated the strength (Fig. 2). The results showed two main trends. Either, there were one or two statements that were clearly ranked higher by respondents. These results were present with the strengths: Learning to Integrate Knowledge; Learning to Solve Real World, Complex Problems; Degree Flexibility; Small Community; Engaged Learning Experience; and Successful Outcomes After Graduation (Fig. 1). The second case showed a relatively even distribution of rankings between either three or all four of the results, as seen with strengths Experiential Learning Opportunities and #BeyondArtsAndScience (Fig. 1).

IV. Discussion

The results that were gathered from the environmental scan and the survey each represent different perspectives on the overall project goal. In the environmental scan, I took the background research and interviews to compile a comprehensive list of distinct program strengths. In the survey, respondents were asked to evaluate statements describing the program strengths as well as compare the strengths to each other. I compared the findings from both parts of the project to make connections between the environmental scan and the survey, and began analyzing KI’s recruitment messaging.

One of the most important takeaways from the survey data was how well it coincided with the results of the environmental scan. In Figure 3, it shows how respondents valued many program strengths as important to their decision to apply to KI. There was relative parity across the responses, aside from two outliers; the respondents saw value in each of the program strengths as important to their application process. This finding confirms the environmental scan results from the perspective of stakeholders who have yet to join a post-secondary community.

Transitioning towards an individual strength perspective, the results show two key distinctions between the test statements that describe the program strengths (Fig. 2). Either, respondents preferred one or two statements more than others or there was relative parity between statement rankings (Figure. 1). The results show that the stories we tell about program strengths need to be tailored to what students are looking for. In the case of the program strength, “Learning to Integrate Knowledge”, that might mean talking more about combing areas of study in education (Fig. 2), because it ranked so much higher than other statements (Fig. 1). In the case of #BeyondArtsAndScience, recruitment messaging can take a more general approach when describing the strength, accounting for the even distribution of rankings statements received (Fig. 1).

Overall, the results of the environmental scan were overwhelmingly positive and showed how different stakeholders in this project understand the strengths of KI. The results and analysis produced from this project will be able to be put to use in the upcoming recruitment cycles. Understanding the parts of KI that are important to the target audience is crucial for growing program application numbers and awareness for the great work being done in KI. To lots of students, KI can offer many of the things they want to get out of a University education, the question for KI is: how can the recruitment messaging convey these strengths more effectively to prospective students? Through the work in this project I think I have helped lay the foundation to do that.

V. References

The evolving landscape of science communication: A case study on interdisciplinary accommodation in the Internet age

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Abstract - Accessible, accurate, and engaging communication of scientific knowledge is critical to cultivating mutual understanding and trust between scientists and publics. The number of possible venues for communicating scientific knowledge has increased as the journalism landscape has evolved with the advent of new media environments like blogs and forums like Reddit. My project explores differences between genres of science communication through analysis of verbal data from a case study on the creation of synthetic yeast chromosomes. Specifically, my research investigates how the arguments for application in this emerging news story change as the story is translated across time and space. While some characteristics of the press releases carried through to popularizations, there were noticeable differences between the stated applications in press releases versus in traditional media, blogs, and Reddit. Each genre offered different emphasis on certain applications over others. Further, it was found that blog posts and Reddit threads contained more technical discussion than the traditional media articles. My results could benefit scientists, science communicators, and audiences alike by providing a deeper understanding of the science communication ecosystem they work within.

I. Introduction

The Internet age is rapidly transforming the science media ecosystem, causing new genres of science communication to emerge with increasing frequency.1,2 Broadcast media and magazines are now antecedent genres to blogs, forums like Reddit, and many more emerging genres that communicate science in new ways.

The importance of recontextualization is common across all genres of science communication intended for non-expert audiences. The purpose of a research article is entirely different from the purpose of an online news article or a blog post.3 Therefore, to move research into a new genre it must be adapted to fit the purpose of that genre; it must be accommodated into what the audience already knows and values in order to prove its relevance to the non-expert audience. Making appeals to wonder and novelty are common strategies for recontextualizing scientific knowledge for general publics,3 though just as the authors and audiences for a text differ based on genre, recontextualization strategies must also differ accordingly.

Press releases by university press offices are designed to communicate salient aspects of research and set the agenda for further popularizations.4 With increasing pressures on professional journalists to produce more stories in less time, copying press releases directly is increasingly common.5 In contrast to traditional media, blogs are often authored by researchers or scientists rather than journalists, and blog audiences are largely people with science backgrounds.6,7 This undoubtedly affects the communication of science through science blogs.

The audiences and characteristics of new genres of science communication like blogs or Reddit are increasingly studied. However, there have been few comparisons between depictions of the same science news story in these genres versus in traditional genres of science communication. Through this project, I examine how the arguments for application of a science news story evolve as the story is accommodated for different audiences.
and different genres in the science media ecosystem.

II. Methods

The selected case study is about Sc2.0, a project which seeks to re-write and synthesize the genome of baker’s yeast from scratch, thus creating a synthetic organism that could have new properties or a variety of useful applications.

The corpus was collected using targeted Internet searching. The collected corpus of 46 texts is based on a series of journal articles about Sc2.0 as well as the resulting recontextualizations in the form of press releases, traditional media articles, blog posts, and Reddit threads.

A thematic analysis revealed the major arguments for application contained within these texts. An intercoder reliability test on a representative sample of 10% of the corpus was performed, giving a Kappa value of 0.81. After the corpus was coded, Atlas.ti’s inbuilt analysis tools were used to calculate code occurrences, relative occurrences, and co-occurrences for the entire corpus and for each genre grouping. For select applications, quotations collected through the coding process were analyzed qualitatively for trends and framing.

III. Results

There are many striking differences between the treatment of Sc2.0’s applications by press releases and the subsequent popularizations. Figure 1 depicts the percentage of texts that contained each code and allows for comparing emphasis on certain applications in each genre.

Some applications, like biofuels and new or different properties of yeast, were more common in press releases than in texts from other genres. However, there was significantly more discussion outside of the press releases for other applications, such as ethical concerns and the synthesis of human cells or cells of other eukaryotic organisms.

Basic research is the only application that appeared more in blog posts than in traditional media. Blog posts were not necessarily shorter in length, so this factor cannot explain the discrepancy. Rather, this indicates that blog posts may have placed a greater emphasis on the Sc2.0 project and its process, rather than its applications. In comparison, treatment of basic research was very limited in traditional media, where the terms “basic research” or “basic science” were generally avoided in favour of broad references to improving understanding.

The proportion of texts discussing the ethical concerns resulting from Sc2.0 was similar in traditional media genres and blogs. However, traditional media, including magazines and legacy news outlets, contained more positive and negative value judgements surrounding this application. Conversely, Redditors referred to ethics as an invalid concern or as a barrier to doing scientific research.

The controversial human cells application would use techniques and proof-of-concept developed from Sc2.0 to synthesize synthetic

<table>
<thead>
<tr>
<th>Code</th>
<th>% of Press Releases</th>
<th>% of T.M. articles</th>
<th>% of Blog Posts</th>
<th>% of Reddit Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Averting Disease</td>
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<td>33%</td>
<td>33%</td>
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<tr>
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<td>50%</td>
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<td>17%</td>
<td>29%</td>
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<td>28%</td>
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<td>44%</td>
<td>43%</td>
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<td>67%</td>
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<td>78%</td>
<td>71%</td>
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<td>Raising Ethical Concerns</td>
<td>20%</td>
<td>67%</td>
<td>62%</td>
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human genomes. This application was discussed more frequently in blog posts than in traditional media. This is surprising, as the human cells code frequently co-occurred with the ethical concerns code, so it was expected that these codes would follow similar occurrence patterns. In the texts that did contain the human cells application, significant hedging was a commonly used frame. Redditors also focused many comments on the human cells application, but they did so without this hedging. Redditors more commonly discussed very specific challenges or processes related to creating human cells that were based on previous scientific research. This sort of technical discussion about a still-hypothetical application was not found in other genres.

IV. Discussion

Approaching this project, I asked how applications for argument change as information about Sc2.0 moves across time and space. Ultimately, I discovered that the most major differences appear in the transition between press releases and subsequent popularizations. Further, the frames used by commentators on Reddit are incomparable to frames used to discuss this case in other genres.

The press releases by the organizations driving the project may strive to set the agenda for discussion about Sc2.0. But the arguments for application in the subsequent popularizations did not necessarily match the emphasis in the press releases. The press releases avoided the more controversial applications like human genome writing, whereas bloggers and Redditors embraced it. It is possible that the authors of popularizations wanted to make use of the “shock value” of this application, whereas the press release authors did not want to draw controversial or negative press around Sc2.0.

Balance is a central tenant of professional journalism, so it is unsurprising that traditional media genres contained a balance of positive and negative judgements when addressing contentious issues. However, this finding raises the question of whether these communicators would adhere to such standards if the issue being discussed were settled or widely agreed upon within the scientific community.

The unique frames used by Redditors prove that this forum provides a venue for discussions that are not happening elsewhere in the science media ecosystem. Blogs, in theory, a more open venue than traditional genres of science communication like legacy news outlets. But blog authors have priorities and purposes in their communications that may prevent them from partaking in certain conversations, like those occurring on Reddit. As a site of technical communication, Reddit certainly engages in more specific discourse than other genres. Scientific journal articles are not vehicles for discussion and debate, but Reddit appears to fill this role, especially given the presence of researchers from Sc2.0 in the r/science discussion thread.

While my results represent a single case study, they provide insight that can help science communicators to understand the broader science media ecosystem that their work exists within. It is clear that science communicators across all genres accommodate scientific information for their audiences where possible, and they do so according to their communication priorities and the constraints of their genre. Further research should examine how different recontextualization strategies affect the understanding and opinions of audiences.

V. References

Enriching high school outreach for the Department of Knowledge Integration

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Abstract - How does a university reach out to the high school students that will best fit their programs? This is no new question for university marketing and recruitment, but it is especially pertinent for new, niche programs that wish to grow their incoming classes. Knowledge Integration, the University of Waterloo’s flagship interdisciplinary program, is one such case. Although it has traditionally brought in exceptionally-talented and motivated students, it has recently had difficulty identifying and recruiting enough newcomers to meet desired targets.

To address this problem, I approached undergraduate recruitment as an opportunity for high school enrichment. This model of outreach has traditionally succeeded because it offers benefits to its participants and the university alike. However, for such an endeavour to be feasible for Knowledge Integration, it must exist on a scale that can be supported through a minimal budget and with only the help of student volunteers. Out of these constraints, I crafted the following problem statement: how might we attract high school students to Knowledge Integration and the University of Waterloo while providing them with a rewarding enrichment experience?

My proposed solution is a series of workshops on real-world problem solving skills for high school leadership classes. I identified that this audience would benefit from and relate to the Knowledge Integration curriculum after speaking with various high school teachers and university outreach coordinators from across the Waterloo Region. From this insight, I developed a pilot series of workshops which ran during February and March of 2018 with the support of Knowledge Integration staff and students. Feedback from the pilot indicates that the program has been successful as both an enrichment activity and a marketing tool.

I. Background

The Department of Knowledge Integration needs more students. For years, the Knowledge Integration (henceforth “KI”) undergraduate program at the University of Waterloo has not been able to reach the cohort size required for financial stability.¹ Despite a widespread desire to attract more applicants, however, there are few resources available within the department to increase outreach. Only one full-time staff member is responsible for high school connections and recruitment, and that responsibility is accompanied by a multitude of other administrative duties.²

Compounding these difficulties is the recent loss of KI’s signature high school outreach initiative: Waterloo Unlimited (henceforth “WU”). Run three times a year, WU invited motivated high school students to spend up to five days at Waterloo learning about transdisciplinary topics and university life. The program’s benefits were three-fold: for students, WU was a unique enrichment opportunity, allowing them to explore topics that aren’t typically covered in high school classes; for KI, WU was a platform to communicate the benefits of KI to its ideal audience; and for the university-at-large, WU was a showcase for the academic and extracurricular opportunities that Waterloo had to offer.

Although WU’s financial model was not ultimately sustainable, the program was largely successful in its aim to provide a transformative learning experience and attract students to Waterloo.
Nearly two thirds of WU alumni since 2007 applied to Waterloo, over half of whom ultimately enrolled there.\(^3\) The WU social media accounts are also rife with student testimonials describing the impact of the program on their personal and academic lives.\(^4\) These accounts demonstrate that despite WU’s closure, there has been great benefit from the enrichment-as-outreach model – a new program which adapts that approach to operate under a tighter budget could be incredibly beneficial to high school students, KI, and the University of Waterloo for years to come.

With the above considerations in mind, I crafted the following problem statement: *how might we attract high school students to Knowledge Integration and the University of Waterloo while providing them with a rewarding enrichment experience?*

II. Research and Insights

Although I sought a wide variety of inspiration in the early stages of my project – including a survey of existing outreach/enrichment programs – the vast majority of my research came from conversations with relevant professionals. Over two months, I spoke with members of the Department of KI, former WU staff, and teacher contacts at local high schools. Of the broad range of advice they offered, the following three points encompass what was most pertinent to my later work.

The first key suggestion was to take advantage of existing resources and connections. When I asked about the scope of my project, responses ranged from “definitely feasible” to “borderline impossible.” As such, it was crucial that I work as efficiently as possible with what was available to me, adapting existing materials whenever possible. Additionally, as I had anticipated from my preliminary research, KI was limited in its ability to financially support outreach programs. However, from its time running WU, KI had other types of resources that it could contribute, including a rich network of school contacts. With the remnants of prior projects as tools, I could avoid building resources and relationships from scratch.

At the same time, I was advised against merely reproducing WU on a smaller budget. Instead, I was encouraged to identify what core experience I wanted to provide and what specific audience I wanted to cater that experience towards. From there, I could determine how a program might accomplish that experience on the smallest possible scale, and build the program outward from that “minimum viable product”. By minimizing assumptions going into the project, I could better orient this new program around its own scale and goals.

Finally, I was alerted to the challenges of working with high schools. Although teachers would be optimal connections (and potential champions) for the program, they have incredibly busy jobs that sometimes preclude collaboration. Additionally, teachers are inundated with external opportunities, and tend to be skeptical of recruitment schemes. As such, any work that I did with teachers would need to build relational capital, providing tangible benefits before asking anything of them.

III. Implementation Plan

Following the aforementioned advice, I began my plan by identifying a core demographic: students in leadership classes at local high schools. These “leadership students” were an ideal demographic for three reasons. First, as students in an elective course in peer support, they demonstrated the drive and initiative that KI looks for in applicants. Second, the “leadership” framework aligned with KI learning objectives like real-world problem-solving, allowing us to connect KI to more broadly-understood skills and values. Finally, working with existing student groups would make it easier to organize and coordinate the program, as it eliminated any need on our end to search out and/or select individual participants.

Since this approach would inevitably require cooperating and collaborating with teachers, I also determined that the first iteration of the program would require as little effort on the teacher’s part as possible. For instance, rather than running a program at the University of Waterloo, I would bring it to local leadership classrooms and run it within a normal school period. These short visits would help to build a relationship between each school and KI, establishing goodwill and laying the groundwork for further collaboration in the future.

Ultimately, the implementation plan took shape as follows – over the first few months of 2018, I would create a series of real-world problem-solving workshops to be taken to local leadership classes with the help of KI student volunteers. At each workshop, we would collect feedback and gauge interest in further exploring KI-related topics. If a class was interested and available, we would invite
them to visit the University of Waterloo to learn more about collaborative design and speak with KI student leaders. In December, this plan was presented to the Department, which was able to contribute a small budget to cover the cost of materials and transportation.

IV. Outcomes

In January, I began promoting the workshops to local schools. Most of these emails went out to the teacher contacts from Waterloo Unlimited, although some went to more recent or personal connections to KI. Of the eleven schools contacted, five indicated interest, four of which were ultimately available to work with. As I coordinated the finer details with each class, I began to assemble and train KI student volunteers, who provided feedback as I developed the lesson plans. The school visits were ultimately scheduled to take place during the week of February 12 – corresponding with the Winter term study days for the convenience of my volunteers – and the following Friday.

Although there were some variations from school to school to suit individual needs and account for prior feedback, each workshop followed roughly the same formula. We began by introducing students to the nature of real-world problems, and what challenges arise when we try to solve them. Subsequently, we introduced them to a simple real-world problem to solve, such as building a better backpack. In groups, students then worked through each step of the design process – problem definition, idea generation, idea selection, prototyping, and evaluation – to create their solution to said problem, and shared that solution with the class. Finally, we asked each student to share two pieces of feedback: one aspect of the workshops they found useful, and one aspect they found boring.

The reception to the workshops was overwhelmingly positive. Students found the workshops engaging and enjoyable, and found the design cycle to be a useful framework for collaboration and problem-solving. Most criticism was centered around pacing (which was alternatively too fast or too slow) and the choice of real-world problem (students wanted to engage with more complex problems than the backpack); even so, a small portion of students at every workshop insisted that “nothing” was wrong. The workshops were also well-received by the teachers – they found the content to be well-connected to the course curriculum, and many expressed interest in having KI visit again in the future. One teacher was particularly interested in coming to visit the University, but plans for the visit unfortunately fell through.

V. Next Steps

Over the next month, I plan to produce two document packages. The first will be a post-mortem package for the Department, which will evaluate the program based on its value as both an enrichment and recruitment tool relative to the time, effort, and money it needs to be run. The second will be intended for KI students who wish to run the program in the future, which will include fully annotated versions of each workshop and a transition document detailing school contacts and advice on running the workshops.

VI. References

THE CREATIVE REVOLUTION:
INCORPORATING CREATIVITY IN TRADITIONAL ORGANIZATIONS

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Abstract - We typically think of organizations like banks and hospitals as “traditional organizations” defined by rational, bureaucratic processes, rather than creativity. However, creativity is playing an increasingly important role in how these organizations operate and is seen as a key ingredient in organizational innovation, competitiveness, and prosperity. Nonetheless, there is little research outlining the processes traditional organizations use to implement creativity, or whether these strategies follow the best practices for becoming creative as outlined by experts and researchers. I address these gaps by examining the following research questions: What are the current practices used to incorporate creativity within traditional organizations? What are the benefits and challenges associated with these practices? How might we improve these practices to make the incorporation of creativity more effective? To answer these questions, I conducted 16 semi-structured interviews with two groups: 1) external consultants who facilitate organizational creativity and 2) individuals working for traditional organizations incorporating creativity. I find that: 1) Creative work in traditional organizations tends to be highly dependent on individual people, specifically in leadership positions or “enabling services” such as HR and IT; 2) Creative projects require ownership from the people implementing them to be successful, even though these people may not have creative training; and 3) Traditional organizations lack a common understanding of the language surrounding creative work, largely because this language adapts and changes often. Based on these findings, I offer recommendations about how to integrate creativity into traditional organizations in effective and sustainable ways.

I. Introduction

Creativity acts as an economic driver, shifting the current knowledge economy to the new creative economy¹. Rather than rigid bureaucracy and instrumental rationality, creativity has become the defining feature of contemporary Western societies. For example, governments and policy-makers value creativity as a route to economic development and prosperity,¹ psychologists see creativity as a route to personal growth and self-actualization,² and organizations that have not historically been creative are increasingly adopting creative values and practices to become more innovative, competitive, and successful³.

Although we know organizations are trying to be more creative, there is little research describing what is occurring when traditional organizations incorporate creativity. More specifically, there are gaps in how efforts to make traditional organizations more creative impact the work, experiences, creative output, or success of organizations and their workers. In turn, there is little research outlining the what challenges traditional organizations are facing when incorporating creativity and how these challenges might be overcome.

What we do know is that traditional organizations are characterized by rationale and bureaucratic processes, valuing loyalty and seniority⁴. Job descriptions, and organizational charts are pre-determined by managers⁴. In turn, they develop a hierarchical structure to the organization, where teams are divided into disciplinary departments⁴. Organizational efficiencies are created within these silos, where changes are difficult to implement within the structure⁵. In turn, traditional organizations tend to be motivated by power, prestige, and income⁴.

In contrast, creative organizations are characterized by openness, diversity and risk. Since the uptake of creative ideas is heavily reliant on
consumer trends, the success of creative organizations is volatile and more open to risk and change\textsuperscript{6}. The structures of these organizations are fluid, where workers value flexibility and openness\textsuperscript{1,6}. Despite this risk, creative workers tend to be intrinsically motivated, caring deeply for their work regardless of its uptake\textsuperscript{3,6}. It is important that the creative workforce has a diverse skillset to facilitate the production and distribution of the creative work\textsuperscript{6}. Due to the interdisciplinary nature of the field, creative organizations rely on tolerance and openness to new perspectives and ideas\textsuperscript{1}.

As creativity becomes increasingly important for economic prosperity, experts have developed best practices to “creativize” (render more creative) organizations. To be considered more creative, organizations need to meet various criteria that influence their organizational capabilities\textsuperscript{3}. These criteria include domain-relevant skills, creativity relevant processes, intrinsic motivation and a social environment conducive to creativity\textsuperscript{3}. Others suggest providing the appropriate environment and resources for creative work including: education to develop their talent and craft, up to date resources for the implementation of new ideas, and a diverse and tolerant environment to embrace new ideas\textsuperscript{1}.

Despite the research on the characteristics of traditional and creative organizations, we continue to lack knowledge about how traditional organizations incorporate creativity and whether their strategies align those suggested by experts. This is most evident when analyzing the lack of knowledge surrounding the processes used to incorporate creativity in traditional organizations, the challenges associated with this work and the organizational outcomes of creativity.

To begin filling those gaps, this thesis focuses on examining the following research questions: What are the current practices used to incorporate creativity within traditional organizations? What are the benefits and challenges associated with these practices? How might we improve these practices to make the incorporation of creativity more effective? These questions were examined using grounded theory analysis of 16 semi-structured interviews with individual involved with incorporating creativity within traditional organizations.

II. Methods

This study used a qualitative research design, including semi-structured interviews with two groups involved with incorporating creative work in traditional organizations. In comparison to other data collection methods, qualitative interviews are best used to understand people’s experiences and how that has affected their perceptions\textsuperscript{2}. To address my research question, I needed to understand what is currently being done in traditional organizations trying to incorporate creative work in their practices, people’s perceptions of creative work in their working environments and the concrete outcomes from this type of work. For this approach, qualitative interviews act as the most effective way to inform my research questions.

In the first set, I interviewed 5 “creativity consultants” an overarching term defined here to mean individuals who are hired as external contractors to facilitate the integration of creative processes in organizations. These interviews provided context and framed my research by revealing what is being suggested by “experts” about how to incorporate creativity into traditional organizations. Due to the diverse nature of this field, not all will identify themselves as “creativity consultants”, but by the nomenclature appropriate for their context. However, each of these individuals share the similar goal of externally advising organizations to become more creative or innovative.

In the second set, I interviewed individuals working for traditional organizations that are trying to become more creative. More specifically, I interviewed 11 individuals working for internal innovation labs and departments focusing on creative work (marketing, design etc.). This set of interviews was used to understand what practices traditional organizations are using to integrate creativity within their work, how it translates to organizational outcomes, and the challenges and benefits associated with introducing creativity. Each of these interviews was aimed at understanding what is currently being done to incorporate creativity in traditional organizations and the associated benefits and challenges with those processes.

Each of the interviews were recorded and manually transcribed to be analyzed using grounded theory. During the interviews, I took detailed notes of pertinent information which were used to develop a start-list of descriptive codes for the first cycle of coding. Codes in this start list included commonly themes, policies and methods within the
organizations. Following the first cycle coding, I generated pattern codes to explain some of the commonly occurring themes in the transcripts. After further analysis of these patterns, I developed a list of key findings which were further analyzed to develop the preliminary findings for this thesis.

III. Results

Preliminary analysis of interview transcripts revealed three preliminary findings. Each of these findings are factors affecting how traditional organizations creativize their work. The same findings were found among both creativity consultants and creative workers within traditional organizations.

1) Single Dependencies:
Since incorporating creativity is typically not a priority within the existing bureaucratic policies of traditional organizations, creative projects are first introduced and supported by individuals or groups within the organization. More specifically, the implementation and success of creativity in traditional organizations tends to be very dependent on the acceptance and support of individuals in leadership positions or “enabling services” such as HR and IT. In terms of leadership, creative ideas require support from internal champions willing to justify the risk associated with creative decisions. In terms of “enabling services” if someone wants to pursue a new creative idea, “enabling services” approves the resources needed to develop the project. Lack of support in either of these areas puts creative projects at risk of being rejected.

2) Need for Ownership
Creative projects are best adopted when those implementing them have ownership over their ideas. To develop ownership of an idea, individuals invest in its development, similar to developing intellectual property. However, those tasked with implementation such as frontline workers and decision-makers do not have training in creative disciplines. Creative consultants are reliant on organizational ownership, so their ideas are implemented after their term with a client. Creative ideas require buy-in from those implementing them to ensure they are implemented appropriately throughout the process.

3) Lack of Common Language
Creative work is dynamic, where successful ideas and processes are continuously changing. Comparatively, traditional organizations are highly procedural, requiring high levels of time and commitment to enact organizational change. Due to the constantly changing processes in these highly procedural environments, there is a lack of common language surrounding creativity within the organization. This becomes problematic when there are differing expectations of creativity among the members of the organization. For example, many interviewees noted situations where they were asked to produce a disruptive creative idea, but when speaking to their clients and leaders during the implementation phase, they realized their goal was to create organizational efficiencies. This caused them to change their approach to meet organizational needs. In turn, the changing nature of creative processes make it difficult for creative departments to be supported in a sustainable way.

IV. Discussion & Recommendations

By analyzing these findings, we see that some of the current practices used to incorporate creativity in traditional organizations do not align with best practices suggested by experts. Based on these findings, I offer a set of recommendations used to sustainably integrate creativity within traditional organizations.

1) Creativity Training
Creative work in traditional organizations tends to be highly dependent on individual people, specifically in leadership positions or “enabling services” such as HR and IT. In turn, if a leader does not support the creative departments within the organization, or enabling services deny access to appropriate resources for creative work, it will not be implemented. This practice is inherently problematic, as the success of creative work tends to be highly uncertain and volatile, where no one person can accurately predict its potential success. In turn, this high reliance on single people puts the creative departments at risk if others disagree with their ideas or the organizational structure changes. To mitigate this risk, I suggest offering creative training to leaders and all workers across the organization, eventually leading to creativity being more deeply implemented across organizational departments and roles. Although this does not alleviate the risk associated with the volatility of creative markets, it provides organizational workers training to better understand and assess the creative
process. Also, this way, organizations can mitigate the risk of losing support for their creative departments upon organizational re-structuring.

2) Embedded Creativity

Creative projects require ownership from the people implementing them to be successful, even though these people may not have creative training to do so. Interestingly, those who develop the ideas for creative projects in traditional organizations are not always those tasked with implementing them. Creative projects are subject to high levels of risk, where it is difficult to predict whether a creative product will be successful. However, despite this risk, creative workers are intrinsically motivated, where they value the process and the skills developed to improve their craft. If workers are not directly involved in developing these creative projects, it becomes difficult to develop this intrinsic motivation. For these reasons, I recommend that organizations keep workers involved in the implementation imbedded in the work throughout the process. In terms of consulting, this means developing creative strategies with clients to ensure that they fit within their organizational context. In terms of work within the organization, it is important to develop creative projects transparently and collaboratively, where both creative workers and those tasked with implementation are involved throughout the process. If it's infeasible to have all workers involved in all stages of the process, the organization should ensure clear communication between those developing the ideas and those implementing them. This can be done through many ways including internal online dashboards or status reporting.

3) Developing a Creativity Policy

Traditional organizations lack a common understanding of the language surrounding creative work, largely because this language adapts and changes often. They rely heavily on the defined processes and procedures of the organization, where it takes time to develop organizational policy changes. Due to the dynamic changing nature of creative work, it is difficult to develop and maintain common language surrounding creativity within an organization. There is no concrete definition for creativity, how it measured and how to determine if it's successful. To creativize an organization in a sustainable way, the organizations must clarify what is meant by creativity and how it aligns with the organizational goals. To do this, I suggest developing a creativity strategy policy. This policy allows for the organization to develop a common understanding of creative work within their organizational context. The final thesis for this project will include a framework for this strategy providing organizations with a general outline of specific areas of focus to incorporate creativity within the organization.

Among others, these recommendations provide sustainable and effective ways of implementing creativity within an organization. It is important to note that these recommendations often do not relate to the creative work itself, but the organizational context that fosters and encourages this work. Also, because all organizations and the policies that govern them are different, it’s important to use the creative strategies that best align with the given organizational context. By creating an environment that fosters creativity while maintaining organizational efficiencies, traditional organizations can benefit from the new waves of complex problem-solving driving the creative economy.

V. References

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I. Introduction: A Critique on the Mainstream Fashion Industry

In recent years, words like “Androgynous,” “Gender-Neutral,” and “Unisex” have become buzzwords in the world of high fashion. Designers like Joe Casely-Hayford, Rei Kawakubo, and Rad Hourani are critically acclaimed for their bold, unconventional and androgynous fashion. Unfortunately, their ground-breaking designs have not trickled down into the mainstream fashion industry. By mainstream I am referring to the clothing sold by big brand retailers. There are very few options for people who seek a more androgynous gender expression.

When shopping at a mainstream clothing retailer that sells both men’s and women’s wear, there is often a clear divide down the middle of the store that separates the men’s section and the women’s section. This divide is made clear by the styles that the retailer sells. Quite often, the menswear is identified by its lack of variety. There are usually few colours and prints and few styles to choose from. What menswear lacks in variety, women’s wear makes up for, with many colours and styles, but this is often in a way that is meant to emphasize the female figure. Except for casual clothing, there is little overlap between the two sections, making it difficult for the people who want exactly that.

Noticing this user gap, I looked into alternative clothing options and for the most part was disappointed. The clothing I found all seemed to fit broadly into a couple categories: odd and artistic – clothing that is visually interesting but largely not practical for daily life – and clothing that still caters to the gender binary but is marketed as androgynous. However, I did find some retailers that provided...
viable options for androgynous clothing such as Gender Free World (GFW), MuttonHead, and Sharpe Suiting. These retailers all sell high-quality, functional, and wearable androgynous clothing. Unfortunately, retailers like them are few and far between.

Another problem with the mainstream fashion industry is how different styles of clothes are marketed. Typically, men’s and womenswear are marketed to masculine and feminine ethical categories as if gender itself is an ethical category (1). This makes it easier to mass-produce clothing as retailers can make a sizing chart and a set of patterns for the menswear and a separate one for the womenswear. These sizing charts emphasize a rigid gender binary as they often prevent people with male and female body types from shopping outside of their “designated” section. A sizing chart for a male body-type will be boxier than that of womenswear; it is made to accommodate wider shoulders, a straighter body, and longer limbs. A sizing chart for a female body-type is made to accommodate the body’s curves; it will have narrow shoulders, wider hips and will be shorter than the menswear. This ensures that neither set of sizes will properly fit someone with the opposite body-type. This lack of inclusivity in the sizing charts may make it easier for retailers to mass produce their product, but it reinforces a sense of cis-normativity and helps to alienate people who seek a more androgynous gender expression by restricting them to a marketed ethical category that they might not belong to.

The rigid divide in both the styles and sizing charts in the mainstream fashion industry are extremely problematic. Judith Butler in her paper on gender performativity states that gender is performed, but we do not wake up and decide which gender to perform; we do not have that much choice in the matter (2). So, by not providing many clothing options for those who prefer a more androgynous gender expression and performance, society is causing their performance to be lack-lustre. Moreover, the act of dressing is described as a “situated bodily practice” (3). This means that “dress is both a social and a personal experience” and that it affects how society interprets the wearer (3). Being unable to dress yourself according to how you want society to interpret you would result in a large amount of stress and anxiety. So, by not providing more inclusive sizing or androgynous styles, mainstream clothing retailers make it so that people who want to express their queer gender performance through their dress have a much harder time than their cis-gendered counterparts.

These problems and user gaps in the mainstream fashion industry led me to seeking a solution.

II. Scoping the Project

Looking at the problems that I had seen with the mainstream fashion industry and the options that existed in the market for androgynous fashion I came up with a design question to kick-start my process: How might I add to the niche, yet growing, market for androgynous clothing to provide more options for people who prefer a gender-neutral or androgynous gender expression?

While forming my design question, I knew that the scope of the project could not exceed my abilities over two academic terms. I knew that revolutionizing how retailers sized their clothes would be far too large a project. As would finding a way to make retailers provide more clothing options. However, creating a brand with its own sizing chart and clothing line was within my means.

I decided that I wanted my clothing line to be one that anyone could wear, regardless of their gender identity or expression. In my research, I noticed that casualwear is more easily presented as unisex and that there were fewer options for professional wear. Thus, to provide diversity in the market, I opted to work on a line of androgynous professional wear. To ensure that anyone could wear my line, I could not make clothes that were too ‘out there.’ They would still need to resemble a conventional look. However, to break the norm of monochromatic professional wear, I could incorporate bold colours, prints, and embellishments.

III. Some Notes on Androgyny

Before starting with my clothing designs, I needed to understand what it means to dress androgynously and what androgyny looks like today.

Androgyny literally means the fusion of both masculine and feminine traits (4). What society views as androgynous has evolved through the decades. In the 70’s it was a loud and performative act performed by Glam Rock icons like David Bowie (5). Today, however, it is subtler. Androgyny is seen in a person’s wardrobe when they incorporate
elements that are seen as masculine with those that are seen as feminine. For example, androgyny can be achieved by making a standard oxford shirt (masculine) out of a fabric with a soft, floral print (feminine).

One distinction that should be made is between the terms “androgynous” and “gender-neutral.” The two words are often used interchangeably, but this should not be the case. For an article of clothing to be truly gender-neutral, it cannot have any gender identifiers; it is neither masculine nor feminine. It is easy to make an article of clothing androgynous. It is much harder to make it gender-neutral because almost every colour, print, cut, and style has the connotation of being either masculine or feminine. In that sense, androgynous clothing is more versatile; it offers more choice of expression than gender-neutral clothing as you can mix it with items from the men’s and womenswear sections and still maintain a consistent expression of dress.

IV. Creating The Mad Scientist

With a better understanding of what androgyny looks like, I was able to proceed with my designs. In designing my line, I took inspiration from weird fiction of the Lovecraftian sort. The unique aesthetic of it allowed me to take my more traditional designs in a new direction and provided me with a colour palette from which to work. In total, I designed 11 individual pieces for my clothing line, Eldritch. These are 3 shirts, 3 pants, 1 skirt, 2 vests, and 2 jackets. All of these come in multiple colours and prints to make a line of about 25 different garments.

Of these 25 garments, I put together three outfits to make. I found 3 people who were willing to model my clothes and was able to begin implementing my designs. The prototyping phase involved taking my models’ measurements, drafting 2D clothing patterns, and making a high-fidelity prototype with those patterns out of a cheap fabric of a similar weight to what I wanted the finished product to be.

From there, I needed to test my prototypes, or mock-ups, by doing fittings with my models. Looking at how each garment fit, I determined what alterations needed to be made to the patterns before continuing to the finished product. Some alterations I needed to make included shortening hems, widening pant legs, and raising the shoulder placement on a shirt. I was able to move to the final product after that. I did all this by spending a minimum of 15 hours a week on producing clothing over the winter term.

Because clothing is considered an integral part of the self and affects how you and others perceive yourself, I needed a brand that would unify the clothing line I created while promoting a positive image to my users. I decided on the name “The Mad Scientist.” In literature the archetype of the mad scientist is filled by someone who defies norms and is deemed ‘mad’ for their actions. However, they always go on to accomplish extraordinary feats. This fit what I want to do perfectly. I am looking to
challenge norms: the ideas of cis-normativity perpetuated by the mainstream fashion industry, and the norm that professional wear must be plain. With The Mad Scientist, I want to help my wearers inject a little madness into their wardrobe and encourage them to challenge norms and achieve extraordinary feats.

To sell and display my finished product to my hypothetical customers, I created a website on which to view the line. I determined the price for each garment by adding together the material cost and the labour cost, giving myself $16/hour pay. This can be found at www.jannakdjoe.wix.com/themadscientist.

Still to come for my brand is a sizing chart. I will be basing this on the fantastic sizing offered at GFW and by researching how other brands size their clothes.

V. References

Fig 3. The logo for The Mad Scientist
Sample Selection Methods & Practices in Local Co-operative Impact Studies

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Abstract - Impact studies have been a largely 21st century development in co-operative research, giving insight into important statistics required for understanding the status of the co-operative business sector. While a variety of studies have been conducted on national and sub-national levels in Canada and the US, sector-wide investigations into local co-operative landscapes have been a more recent development. Local impact studies have the potential to provide more granular bases for analysis. The studies analyze co-operatives in the context of neighbourhoods and cities, which for many co-operatives are the natural scale of ecosystem in which they are known, provide services, and have membership. The methodology for these analyses will be important as more studies are initiated. One important element in the compiling reports will be consistent selection of co-operatives for studies. This paper explores key methodology decisions encountered in sample selection while conducting an impact study of co-operatives in the Regional Municipality of Waterloo. Areas of interest will be outlined, discussed in the context of existing literature or convention in academic or industry literature, and recommendations for future best practice established. Key areas explored in proceedings are: methods of identifying potential co-operatives; identification of pseudo-cooperatives; inclusion of various non-Cooperatives Act financial enterprises, buying clubs, collectives, or non-incorporated co-operatives; and treatment of co-operative operations not conducted within the geographic bounders of the study by co-operatives headquartered in that region.

I. Introduction
While some analysis has been done on the provincial or national levels on co-operatives in Canada, most notably by Karaphillis, Lake and Duguid for Canada, Ontario and Manitoba¹,²,³, sector-comprehensive, local co-operative impact studies are not yet common, with a more common unit of local analysis being certain co-operative sectors. The potential for future study is growing, with significant new literature and academic interest on methods and the conducting of impact assessments⁴ and in Ontario specifically with the creation of regional co-operative hubs by the Ontario Co-operative Association⁵.

Where provincial level assessments have a high-level quantitative focus on aggregate statistics, local studies, such as that conducted by Dixon on the Guelph co-operative environment⁶, provide opportunity for more narrative delivery of information, discussing historical and geographic factors in the co-operative environment, highlighting prolific local co-operatives, and outlining statistics more specific to the types of co-operatives in the area. However, because of this narrative and discretionary structure, it can be tempting for researchers to deliberately include or exclude certain organizations from their sample in a manner that would be less apparent than in larger scale studies that tend to rely more heavily on databases for data.

To bring academic rigour to local impact studies, it is important for each study to be transparent in its sample selection, but it is also important to begin creation of general consistent practices between studies, both to help with comparability in common statistics and analysis, but also to provide standardization and legitimacy to the process of creating these studies.
II. Findings and Recommendations

Provincially Incorporated Co-operatives:
Incorporated co-operatives in the province of Ontario can be found under the Financial Services Commission of Ontario website. To identify co-operatives, an author should compile a list of all communities of note in the area of study, to use as the primary search criterion for the database. In this study, two tools were used for this purpose; firstly, information available on the website of the regional municipality, and secondly, Google Maps. These yielded a list of 31 communities, which allowed for compilation of a list of co-operatives via the database. When cross referenced with a previous confidential list compiled by the Ontario Co-operative Association, this method missed no co-operatives, and can provide a good basis for future work, if commitment to identifying and including small communities is maintained.

Search results include co-operative status as Active, Dissolved/Inactive, or Unknown. To verify existence of an Active or Unknown status co-operative, the legal name of the co-operative was put in a Google Search, and a Yellowpages search, and being included if the co-operative could be found by at least one of those methods. The choice of this methodology was that as businesses, co-operatives generally should have contact information available for potential customers and members, and that this is also a pragmatic side-effect for a researcher requiring a contact or reference for the co-operatives for the study.

Federal Co-operatives:
Federal co-operatives are included under the Canada Federal Corporations database. They are not searchable by location, but being fewer in number, are searchable by province, using the words “coop”, “co-op”, “co-operative”, “cooperative”, “coopéerative”, “united” and “pool”, consistent with name restrictions in the Canada Cooperatives Act, and then use of researcher discretion by use of searches in line with the provincial co-operatives procedure, and searches based on co-operative name, location of directors, and headquarters to inform eligibility. This method yielded only one result for the region, with no Ontario Co-operative Association co-ops listed that were missed.

Pseudo-co-operatives:
Incorporation is not the only indicator of legitimacy as a co-operative. While most co-operatives are organized to act upon the co-operative principles, some incorporated co-operatives are not recognized as co-operatives for the purposes of this type of research, in line with literature on the matter of pseudo-co-operatives. For the purposes of identifying pseudo-co-operatives on a secondary research basis, it is generally possible to make such a judgement from a business website. To assess authenticity as co-operative, researchers should navigate the website to find reference to one of: a) co-operative principles b) discussion on a community-oriented philosophy c) clear indications of how to obtain a membership d) discussion of co-operative ownership structure, or e) discussion or reference to a co-operative distance or a “Why a co-operative” section, any of which would satisfy some sufficient quality of the International Labour Office’s conceptual framework for classification.

Non-Ontario Co-operatives Act Financial Organizations:
Credit Unions and caisses populaires are commonly thought of as co-operatives, despite not being under the Act. The Guelph study has included these organization, as will the Waterloo study, as these organizations typically ascribe to co-operative principles, values and practices, and participate in secondary co-operative organizations. They are also explicitly recommended for study inclusion as financial co-operatives by the International Labour Office. In Ontario they can be identified through their deposit insurance listing.

Mutuals are also not under the Act, but typically also share in co-operative principles and values, and are monitored by the World Co-operative Monitor. While they generally do not form part of secondary co-operative organizations, mutuals have traditionally been an element of the national tertiary landscape with Co-operatives and Mutuals Canada. While they were not included in the Guelph study, they will be included in the Waterloo study for these reasons, and listings can often be found via reinsurance mutuals or by mutuals associations.
The Co-operators Group was included in the Guelph Study, Co-operators brokerages may not be owned by the Co-operators group, but the products are ultimately of a co-operative nature, which was the reason The Co-operators were included in the Guelph Study\textsuperscript{6}. The Waterloo study will also include the Co-operators. This study, and future studies, considering the ownership of brokerages, should place emphasis not on any financial statistics on the brokerages, but instead focus on the number of policyholders, and the value of the insurance, to reflect the ownership structure of The Co-operators.

Other Organizations:

Buying clubs have common economic ties, but do not generally have any formal commitment to most co-operative values such as democratic decision-making, can exclude members, and can be highly informal. For this reason, buying clubs should be excluded from samples in future study.

Literature on collectives and their relationship to co-operatives for purposes of reporting. Collectives, while generally democratic, may or may not conduct enterprise, which is a key component of co-operative identity across multiple sources\textsuperscript{10}. Without ready, comprehensive sources for identification of collectives, and the time required to assess their principles, membership conditions, or other cooperative characteristics, collectives were untenable for the Waterloo study, and unadvisable to pursue in future studies without further justification.

Organizations in the process of incorporating as a co-operative run into an issue in that there are no assurances of incorporation. Nevertheless, because of the infrequent nature of these studies, there should be room for discretion in whether organizations should be included. In determining this, a researcher should consider where the organization is in the process, if they are proceeding towards incorporation, and whether their operations currently are of a substantive nature. The researcher should declare such decisions in their study. The Waterloo study has excluded one non-incorporating co-op due to its non-enterprise focus.

Demutualizing organizations are of concern due to the infrequency of studies. The importance of impact studies are described as, “[a] realistic estimate of the economic and social impact of co-operatives is required to demonstrate that co-operatives are neither small nor marginal organizations”\textsuperscript{14}. The debate is whether a coop without longer-term longevity can effectively highlight the capacity to deliver service differentiated from conventional corporations. The Waterloo study has chosen to include a long-lived demutualizing co-operative, under the philosophy that the co-operative highlights the potential impact of co-operatives in the event of a more favourable environment towards co-operatives. The study will note the demutualization.

Organizations not Headquartered in Study Bounds:

The Guelph study highlighted the Co-operators in totality, even though operations are spread throughout Canada. This method, while convenient for statistical accessibility and ease of identification, does not reflect the community-centric nature that a local co-operative study should seek to advance. Literature suggests that because of co-operative structure, profits are more likely to stay in their communities\textsuperscript{15}. For this reason, the Waterloo study is seeking to represent co-operative statistics based on operations within the Region, not headquarters or places of incorporation. Future studies, to avoid double counting, should maintain an interpretation of local co-operative operation. To attempt to find other co-operatives, use of co-operative keywords in searches in Yellowpages or Google Searches/Google Maps, and subsequent verification of co-operative status should provide consistency between headquartered and non-headquartered co-operatives.

III. Discussion

While generally accessible, researchers should take note of consistency in methods of identifying federal and provincial co-operatives, using a combination of databases and methods verifying \textit{bona fide} presence in the community.

Credit unions have been traditionally included in studies and should continue to be. In addition, mutual insurers in Canada also typically have close ties to co-operatives in the social economy, and are overlooked contenders in assessing the impact of co-operatives and co-operative-likes on communities. Mutals should be considered alongside the co-operatively owned Co-operators.
Group in providing insurance in the co-operative vein to citizens.

Other organizations may provide gray areas where researcher discretion remains important but where justification guidelines can provide more legitimacy and structure in decisions. Consideration must be given to the level of impact and age for both incorporating and dissolving or demutualizing organizations. Collectives represent an opportunity for greater research and theory to develop a framework for inclusion or exclusion of collectives in impact studies.

Important in consistency for studies is not simply what types of organizations are included, but how their operations are counted. The close community nature of co-operatives, both in literature, and in Co-operative Principle 7 tend to suggest that impact should be measured by local operations to the greatest extent possible to prevent overstating statistics.

In the future, consistent sample selection shows potential for a cohesive ‘patchwork’ of local studies, showcasing important cooperative actors and environments within the context of a unified approach to whom the impact studies include in their methodology.

IV. References

Too many children, not enough homes: Examining how foster parent–caseworker relationships and contradicting motivations effect retention of foster parents in Ontario

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Abstract - Using Anthony Platt’s critique of the Progressive Movement in the United States and the roots of social work in his book, The Child Savers, as a framework, this study will explore and contrast the motivations inherent in the foster care system with the motivations of foster parents in order to provide a potential explanation for the generally poor relationships between caseworkers and foster parents, which is a frequently cited cause of the low retention of foster parents. While foster parents are primarily motivated by altruism, Platt’s analysis uncovers a system based in social control, which is perpetuated by the agents of the system: caseworkers. A survey administered to foster parents in Ontario through membership of the Foster Parent Society of Ontario (FPSO), will examine the motivations of foster parents and their perception of their relationships with caseworkers. Preliminary findings show little variation from previous studies: most foster parents cite wanting to help children as their main motivator and troubles with caseworkers and the agency in general as reasons for considering quitting or quitting.

I. Introduction

The recruitment and retention of foster parents in North America has long been a topic of study for social work researchers and child welfare advocates, with some scholars constituting the lack of available homes as a “crisis”. Foster parents are a crucial part of a vulnerable child’s care team as they are the “front-line of service delivery” and impact the daily lives of children involved in the child welfare system. Across North America “child welfare caseloads have been increasing... and available placements have not kept pace with demand”.

With recruitment a costly and timely process, retention of current foster parents is vital to ensuring Children’s Aid Societies are efficient and effective at protecting children and supporting families. In addition to cost and time factors, the retention of experienced foster parents can improve child outcomes. It is widely assumed that more experienced foster parents will be able to provide better care to children. Children have increasingly complex needs, which are best handled by trained, experience individuals.

Research on foster parent motivation demonstrates that altruism, a love for children, and wanting to save children from harm are the most significant reasons that individuals begin fostering. These internal rewards that motivate parents to begin fostering are related to their continuation in the face of challenges with their foster children, the agency and its staff, and the many financial and emotional stresses that come along with fostering.

Previous research suggests that poor relationships with caseworkers (including feeling lack of respect or teamwork, poor communication, etc.) are highly reported throughout the foster care system and are often cited as one of the significant reasons why foster parents quit or consider quitting. I hypothesize that one of the most significant factors that contributes to the low satisfaction and retention of foster parents in Ontario is the conflicting motivations of foster parents and agents of the child welfare system; caseworkers. Whereas foster parents are primarily motivated by altruism, through applying Anthony Platt’s theory of social control as found in his book, The Child Savers, we can see that child welfare agencies were created primarily as mechanisms of social control; the legacy of which can be seen today in the high
numbers of racialized children and families involved in the system.

II. Methods

Previous research on motivation and retention of foster parents has been conducted through surveys, individual interviews, and group interviews. Surveys included demographic questions and gathered both quantitative (through check all that apply and multiple choice) and qualitative (through comment boxes) data. A survey administered to foster parents in Ontario through membership of the Foster Parent Society of Ontario (FPSO), examined the motivations of foster parents, their intention to continue or quit fostering, and their perception of their relationships with caseworkers and the agency. Questions on motivation to begin and intention to quit fostering were duplicated from Rodger et al.’s 2006 study. Additional questions were created to discover foster parents’ feelings related to trust, decision-making, personal and agency values, and teamwork. These questions (ex. please rate how much you trust the agency) were asked using a likert scale from 1 (not very much) to 5 (completely). Potential participants (foster parents in Ontario) were recruited through email to participate in the online survey.

III. Results

Demographics. Of the 62-individual sample, the majority of participants (82.3%) identified themselves as female, while 11.3% of participants identified as male, with remaining participants choosing no answer. The majority of participants (83.9%) are married. Participants were asked to identify themselves as a minority in Ontario, of which 90.3% did not identify as a minority. Most participants (70.9%) answered that one parent was involved in paid work outside the home. The majority of respondents provide non-kin fostering (87.1%), and 27.1% of participants have been fostering for 4-6 years, 17.8% for 11-15 years, 16.1% for more than 20 years, 12.9% for 1-3 years, and 11.3% for 16-20 years. Total number of children fostered by a foster parent was frequently reported in the 1-5 range (40.3%). 16.2% fostered a total of 16-20 children, 12.9% fostered more than 50 children, and 11.3% fostered 41-50 children.

Motivations. The most significant motivators reported by the sample in this study were “wanted to save children from further harm” (50% reported), “wanted to take in children who need loving parents” (66.1%), and “wanted to give care as a religious calling” (38.7%). Through additional comments, participants extrapolated on their motivations. One participant commented that they foster “to give back to society, it has always been a goal of mine to become a foster parent. In times of need we should all be required to share”. Participants also commented that they “realized there was a need”; they wanted to “give back to our community”, and “make a difference in the life of a child”.

Intent to Quit or Continue. Participants were asked whether they intend to continue fostering over the next 2 years and whether they had ever considered quitting foster parenting. 83.9% of respondents reported that they intended to foster over the next 2 years and 72.6% (45 of 62 respondents) indicated that they had considered quitting at some point during their time as a foster parent. Of those who indicated they had considered quitting 40% of respondents indicated they have very seriously (“5” on likert scale) considered quitting, 24.4% seriously (“4”), 31.1% neutral (“3”), 2.2% somewhat seriously (“2”), and 2.2% not very seriously (“1”).

The personal factor ‘hard to see child(ren) leave’ was indicated by 22% of respondents to have influenced their consideration to quit foster parenting. Other personal factors were rarely noted, with the majority of respondents (26.7%) indicating that none of the personal factors contributed to their consideration to quit fostering.

Systemic factors were more frequently indicated by foster parents as having contributed to their consideration to quit foster parenting, with the most frequently cited factor being ‘lack of agency support’ (75.6%), followed by ‘disagreed with agency decisions’ (55.6%), and ‘poor communication with caseworker’ (46.7%). In addition, ‘no say in child’s future’ (33.3%) and ‘inadequate reimbursement’ (33.3%) were indicated as significant factors. Respondents commented that the “lack of transparency from the agency” was a problem, and that “the agency and workers are all over the place. Make constant errors and never correct them”. Additional comments noted problems of “racism”, “intrusiveness”, “inconsistency”, “agency bureaucracy”, and “not feeling a part of the child’s team”.

Reasons to Stay. To understand why foster parents
were staying in the position despite considering quitting, respondents were asked the open-ended question: “what factors contributed to your decision to continue fostering?”. 55 of the 62 participants (88.7%) responded to the question. 5 respondents (9.1%) responded that they were quitting now or in the foreseeable future when the children in their care “age out” or “until a permanent placement is found”. 3 respondents (5.5%) indicated they returned to foster parenting after taking a break in order to “re-energize” and coming to the realization that they “missed the kids”. The majority of respondents (65.5%) commented that their drive to continue came from a love for children and their knowledge of the need for foster homes. Some comments stated simply “the child”, “helping children”, “care about the kids in care”, “making a difference”, “lots of children in need”, and “love children”. One respondent noted: “for all the same reasons that we became foster parents, we will continue to foster”. Religious reasons were also noted: “we love children and feel God’s call on our lives to care for them” and “it is one way we demonstrate God’s love”.

IV. Discussion
Consistent with previous literature on foster parent motivations, this study found that altruistic motivators, including wanting to provide loving parents to children, save children from harm, and give back to the community, were the primary motivators for foster parents. System factors were more frequently cited than personal factors as influential in foster parents’ consideration to quit fostering. Congruent with previous research, the most frequently cited systemic factors cited by foster parents involved communication with caseworkers, problems with agency practices and decisions, and lack of inclusion in children’s care planning. Results illustrate that despite negative systemic factors, most foster parents intend to continue foster parenting and do so out of love for children, seeing the desperate need for foster homes in Ontario, and wanting to continue providing loving, safe homes for children in care, which aligns with their initial motivations: providing loving parents, saving children from harm, and giving back to the community.

These results show overwhelmingly that altruistic factors motivate foster parents to begin and continue fostering, whereas Anthony Platt argues that the motivations of the system for which they work are based in social control. Platt asserts that “the child savers were aware that their championship of social outsiders such as immigrants, the poor, and children, was not wholly motivated by disinterested ideals of justice and equality”.

The initial motivations of the child savers who pioneered the creation of the juvenile justice system and related institutions, such as the child welfare care system, have informed the practices of the current system; with disproportionately high rates of African Canadian and Indigenous children and families involved in the system. The Ontario Association of Children’s Aid Societies found that “African Canadians are over-represented in care at 5 times their representation in the population”.

The retention of foster parents is a complex and multifaceted problem. Although the motivations of caseworkers were not explored in this study, caseworkers, as agents of the system, are working in and thus perpetuating the control exerted by the system. Therefore, through exploring the contradicting motivations of foster parents and the child welfare system, we can suggest a possible explanation for the frequently cited negative relationships between foster parents and caseworkers. Future research should aim to delve deeper into the complexities of the foster parent-caseworker relationship and the power dynamics at play in this social welfare system.

References
Trends in corporate responsibility reporting: Intersecting frameworks and practical considerations for Canadian corporations

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Abstract - Canadian corporations are increasingly issuing corporate responsibility (CR) reports to disclose the non-financial impacts of their business. Accompanying this trend are evolving CR reporting frameworks used to guide the format and content of the reports. While these frameworks are similar in some aspects, their differing intended audiences and theoretical approaches have repercussions on the items disclosed in reports. In this study, the overlap between the three most popular international CR reporting frameworks is analyzed and their impact on Canadian CR practitioners is explored. Using a mixed methods approach that combines content analysis of Canadian CR reports and semi-structured interviews with CR practitioners, the data collected shows the influences of reporting frameworks on CR report content. The researcher finds evidence of complementarity between the Global Reporting Initiative and the Sustainability Accounting and Standards Board frameworks, while the Integrated Reporting framework results in a more distinct reporting strategy. The study also finds differences of opinion between CR practitioners and trends within CR reporting in Canada.

I. Introduction

Businesses operate in a complex nexus of economic, environmental, and social systems that affect their business strategy.¹ Publicly listed corporations also have a fiduciary duty to disclose relevant business issues to their stakeholders. Consequently, the field of corporate responsibility (CR) communication has emerged as a part of business practice. As of 2017, the most frequent medium used in CR communication is the CR report, with 93% of the world’s largest 250 companies creating an annual CR report to disclose the environmental, social, and economic impacts of their business.² While the CR report has become ubiquitous, its voluntary nature and non-standardized format and content have caused a distrust of CR reporting.³ International organizations like the Global Reporting Initiative have created frameworks aiming to standardize environmental, social, and corporate governance issues into relevant categories, but the “overwhelming” number of frameworks have instead been seen as diminishing the value of CR reporting.⁴ As a result, initiatives like the Corporate Reporting Dialogue aim to harmonize the various frameworks.⁵ In the meantime, however, the CR practitioners creating reports are left to decide how to best articulate their companies’ CR impacts. It is in this context that this study aims to understand the current state of CR reports, the frameworks that inform them, and the rationale of the individuals who create them.

II. Methods

This mixed methods study used content analysis and semi-structured interviews to investigate CR
reporting trends. Content analysis was used to compare the categories recommended by three international CR reporting frameworks—the Global Reporting Initiative (GRI) G4 Guidelines, the Sustainability Accounting and Standards Board (SASB) Framework and the Integrated Reporting (IR) Framework—with the categories and indicators selected by Canadian corporations. Four Canadian companies from different industries were chosen for the sample based on meeting a threshold of size and revenue as determined by their inclusion in the S&P/TSX 60 index. The sampled corpus consisted of three years of these companies’ CR reports, with a focus on the summary of key indicators common to all reports. These indicators were coded into categories as defined by the three frameworks. Then, semi-structured interviews with CR practitioners from the sampled organizations expanded upon the decision-making process behind their reports and provided input into broader reporting trends as identified through a literature review.

### III. Findings and Analysis

Several main themes and trends were revealed through quantitative results of coding CR reports and alongside the qualitative data from the semi-structured interviews. First, the report summaries are aligned with frameworks to varying degrees. While the GRI was referenced by all companies in the sample as informing the content of their reports, it was rare for all indicators in the summary to fit completely within the GRI framework. Some CR practitioners rationalized this by describing the GRI G4 as “too cumbersome” and “not compatible” with company or industry-specific issues (personal communication, January 29, 2018). Also illustrative of this varied alignment between frameworks and reports are the headings used by companies to categorize their disclosed indicators. As seen in Figure 1, many share titles with frameworks, but subtle differences and minor adjustments year to year demonstrate the variability within the report writing.

Secondly, topics that overlap in the frameworks are reported on more frequently by all companies. In the intersection of the GRI and SASB frameworks, Human Capital and Labour Practices were the most frequently occurring category of indicators. This indicates that issues relating to employees, such as remuneration, training, and health and safety are seen by CR practitioners as important enough to include in the summary of the report. Regarding the IR Framework, its Performance category overlaps significantly with nearly all categories in the GRI and SASB. This is because the Performance category is defined as a CR report containing quantified indicators, which as an essential component of all report summaries.

Thirdly, the distinctiveness of the IR framework

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<tr>
<th>CR Framework Categories</th>
<th>2016 RBC CR Report Headings</th>
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<tr>
<td>General Disclosure</td>
<td>Leadership and Governance</td>
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<tr>
<td>Economic</td>
<td>Business Model and Innovation</td>
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<tr>
<td>Environmental</td>
<td>Environment</td>
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<tr>
<td>Social - Human Rights</td>
<td>Human Capital</td>
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<td>Social - Labour Practices</td>
<td>Social Capital</td>
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<td>Social - Product Responsibility</td>
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<td>Social - Society</td>
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Figure 1. The headings of the 2016 RBC Corporate Citizenship Report show the influence of the three frameworks it is guided by: the GRI G4 Guidelines (adapted), the SASB Sustainability Framework, and the IR Framework.
is apparent in the minimal overlap between certain indicators. This is due to IR’s design, which is substantially different from the GRI and SASB both in theory and application. The IR Framework is a complete reworking of the reporting process using the total value creation model described by Porter and Kramer,¹ as opposed to Elkington’s Triple Bottom Line theory⁶ which is used by the other frameworks. As the IR places a high value on performance metrics, more external CR rating agencies often correlate high quality CR reporting with quantified indicators. Thus, if quantified metrics correspond with quality, the presence of a summary section necessarily indicates a high quality report. This notion pushes companies towards the quantified summary section currently seen in reports. IR also incorporates the dimension of time, with preference given to robust short, medium, and long term goal setting with quantified targets. This means that not all quantification is treated equally.

Finally, other non-framework related trends in CR reporting were identified through interviews. The most notable trend is in differing definitions of materiality: what information is necessary and fitting for a company to disclose. This discrepancy is found both between the frameworks and between CR practitioners. Also, trends were identified in the collaborative writing process, data ownership, how CR practitioners determine the quality of their reports, and the evolving digital user experience of CR reporting data.

IV. Discussion

This study investigated the dynamic between CR reporting frameworks and the CR practitioners that use them. Generally, the more frameworks the report is guided by, the less compliant it is with any one framework. Exceptions to this exist, such as in the overlap between the GRI and SASB. In fact, there is evidence of complementarity of GRI and SASB in one Canadian company; a more SASB compliant report summary tends to be a more GRI compliant report summary. So, although the GRI and SASB have different definitions of materiality, different intents, and different stakeholders in mind, the frameworks can be effectively used in conjunction with each other. It should be noted that this may alternatively be due to other influencing factors in the sample, such as the impact of other normative and management CR frameworks used by the company, such as the United Nations Global Compact and the Climate Disclosure Project that promote overall strategic direction with the report.

Choosing a framework influences how a company defines their general CR. When a report is informed by, but not rigidly compliant to a framework, the CR practitioners retain more autonomy. They are able to cover only the issues germane to their business, enabling a more concise and relevant report. However, this autonomy is in opposition with a main reason for CR reporting: the accountability and transparency that comes with complying to international standards. This has led companies to have select indicators audited by external CR accounting firms, moving towards more credible CR reporting.

V. References

Barriers, Supports, and Inequity: Exploring the Experiences of Disabled Students at the University of Waterloo

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Abstract - Issues of equity and inclusion for disabled students are of critical importance towards building an improved and fairer post-secondary education system for all. While the University of Waterloo provides services, accommodations, and other supports for disabled students, many face barriers and find their needs are not adequately met. Analysis of these issues has usually focused on meeting legal requirements set forth in the Accessibility for Ontarians with Disabilities Act (AODA), but more perspectives are relevant to analyzing and improving the experiences of disabled students. This project goes beyond a single perspective, integrating policy recommendations and best practices with research in educational psychology, sociology, disability studies, and cases from the diverse lived experiences of disabled students. There is a need for research that makes these central voices heard and understood, and that is situated in the context of the University of Waterloo. The objectives of this research are to build a holistic understanding of the diverse lived experiences of disabled students, identify barriers faced by disabled students and their impacts on their lives, and identify relevant strengths, resilience factors, and opportunities for growth. Comparing existing research with first-hand accounts from disabled students at UW provides a more holistic account of resilience factors, challenges, and opportunities for growth at individual, classroom, and policy levels. Through review of the literature and discussions with disabled students, three main themes have emerged: access to care, interactions with disability support services, and implementation of accommodations. The results of this research can be used to inform recommendations for enhancing the experience of disabled students on campus.

I. Introduction

This report focuses particularly on the experiences, supports, and barriers involved in disabled students’ experiences particularly as they interact with the process of accommodations through AccessAbility Services (AAS), the University of Waterloo’s disability support service.

Literature and reports were reviewed from across disciplinary perspectives, involving psychological and sociological studies of instructor and student experiences, along with overall campus climate; policy assessments, longitudinal studies, and reports; and, best practice recommendations including universal design and universal design for learning. These were applied to the context of the University of Waterloo (UW). In addition, this report takes into account many cases of disabled students at UW, demonstrating the impacts of both visible policies and occluded (though similarly consistent) interactional instances.

There are many barriers to success for disabled students, and providing a comprehensive discussion of them all would go well beyond the scope of this report. This will focus on three main themes that have emerged repeatedly in both literature and students’ discussions of their experiences relating to the process of accommodations at UW: access to services, determining accommodations, and implementation. The barriers involved act at not only institutional levels in policy and programming, but also interactionally with healthcare practitioners, instructors, advisors and support staff [1, 2].

II. Access to Services

Financial costs limit disabled students’ access to compassionate care, leaving many excluded from the outset. Both having a disability and lower family income are associated with a lower likelihood to
enroll in post-secondary education [3]. Further, financial supports or difficulties once enrolled in PSE have demonstrated impacts on continued enrollment and engagement, and financial stress is well-documented among post-secondary students [4]. For disabled students, this effect is magnified – gaining access to accommodations through the main disability support system, AAS, requires costs.

Students who had documentation for an Individual Education Plan or equivalent prior to university are often required to complete an additional psychoeducational assessment if the original diagnosis was over 2-3 years ago, even in the case of permanent learning disabilities with minimal (if any) variation in functional limitations, such as Specific Learning Disorders (SLDs) [5, 6]. Psychoeducational and neuropsychological assessments typically cost within the range of $1,500 to $3,500. For many with chronic conditions, a concrete diagnosis can take years of being symptomatic. A disability support service can facilitate access to disability-related bursaries, but this access is not provided until a student has registered with AAS and provided accepted documentation, creating a difficult situation for students who cannot afford these costs upfront.

A student who disclosed their mental health disability to AAS was referred to Campus Wellness to have a “Verification of Mental Health Disability” form completed. When booking the appointment, they were informed it would cost about $50. (In comparison, a UW Verification of Illness form for a single event costs $25 to be completed; at other PSE institutions such as McMaster University, this is free [7].) However, at their appointment a week later, they were charged $125. For many students facing financial struggles along with their disability, such a cost can be prohibitive and lead them to leave such difficulties unaddressed.

To address these costs, attention to how these factors can increase financial stress is necessary. “Interim” status diagnoses should be counted as sufficient to receive support for those who otherwise would be unable to receive diagnoses in a timely manner. The costs associated with official diagnoses should be made clear, and students should be provided support in applying for bursaries to offset those costs.

III. Registration for Accommodations
The process of receiving appropriate accommodation from diagnoses, declarations of functional limitations, and other documentation itself often involves many barriers to access. Whether newly registering with AAS, attempting to revise accommodations, or seeking other support, students are required to make in-person appointments with their advisor. These appointments occur on a one-on-one basis with students, and alternate methods (such as corresponding via email or phone call) are not accepted [5, 8]. Especially for students who are registered due to “mental health related disorders" (at UW, 2017: 30%) or chronic illness conditions (12%) as their primary disability [9], this is a serious impediment to being able to (a) attend the appointment, or (b) communicate their concerns [6].

It is frequently unclear to students how their specific accommodations are decided. Many students have reported presenting with the "same disability" but receiving different accommodations, or being provided a different set of accommodations when transferred to a different advisor (a not-uncommon occurrence). Students feel they have to argue the validity of their disabilities and limitations carefully from a position of vulnerability, without seeming so "high-functioning" as to not qualify at all, reporting being spoken to in an accusatory tone and continually questioned about the validity of their documentation [8, 10]. A perception of difficulty in receiving accommodations is strongly associated with not seeking them [11].

Furthermore, AAS advisors have repeatedly stated that the goal of the process is to not require accommodations by the end of their time at university [5, 8]. However, not receiving accommodations, even in the context of other formal supports such as learning strategists, is associated with lower academic success [11]. The use of learning strategists to substitute for accommodations especially represents a fundamental impediment to receiving accommodations.

1 There are many other categories of disability that may also impede, such as ADHD (15%), certain learning disabilities (15%), autism spectrum disorder (3%), and acquired brain injuries (3%).

These figures include only one's "primary disability"; many students registered with AAS are multiply disabled [8].
misunderstanding of disability and limits students' access and capability for success.

To address these difficulties, some suggest training students to be self-advocates. It is well-known that social supports act as a resilience factor and that disabled students seek assistance from peers to manage these stressful interactions [12, 8]. However, just as learning strategists may help students "cope" with the consequences of inaccessible environments but cannot act as substitutes for accommodations, placing the onus on disabled students to compensate for a system's and their advisors' attitudinal and other barriers is a misunderstanding of both where the problem lies and how it can be effectively addressed.

Instead, AAS should endeavor to make their methods for determining accommodations shared, transparent, and understandable. Instead of insisting on long and often inaccessible meetings, following the Universal Design principles of multiple means of communication and understanding [13, 14] such as by encouraging alternative and augmented communication methods, makes these processes more inviting and ultimately successful for all involved.

IV. Implementing Accommodations

Once accommodations have been obtained, there is often difficulty in having them properly implemented, especially when they diverge from the most common and simple-to-implement extra time on examinations accommodation [9]. When accommodations are not provided by AAS outside of class, professors' attitudes and subsequent actions can enable or restrict disabled students from participating to their fullest capacity. Prominent is the long-documented “debate” over restricting students’ use of electronic and other assistive devices in the classroom. Lombardi et al. find that while 70% of professors endorse accommodations entirely, only 55% act on this [15]. Similarly, they report that while there is strong attitudinal support for Universal Design for Learning in the abstract, few are aware of how to effectively implement it [15]. As a result, many students attempt to negotiate alternate accommodations outside of AAS, continue in the class without those necessary supports, or withdraw from the class altogether [8].

To attempt to negotiate with an instructor often requires disabled students to disclose personal details about their disability status, again adding to barriers that disadvantage some students based on a myriad of intersecting factors [10]. It is understandably difficult for students to determine what aspects of a course are pedagogical requirements and necessary to ensuring academic integrity, and what qualifies as a reasonable accommodation in these cases. This again puts a high onus on students to argue for their accommodations.

Instead, AAS should provide support throughout the process in ensuring students receive the accommodations they require. Instead of requiring the aforementioned meetings to discuss such an issue, AAS should provide means of reporting failures to implement accommodations. Upon receipt, advisors should remind professors of their requirements and support students where advocacy and experience are required to ascertain what is "reasonable" within the constraints of a given course.

V. Discussion

These findings show that there are many barriers throughout the accommodation process that are highly impactful to disabled students; namely, with respect to access to services, determining accommodations, and implementation in courses. These barriers vary significantly in form and solution. As many are at least in part attitudinally-based, simple revisions to policy will not constitute effective solutions.

Social supports and advocacy skills both act as mitigating factors; however, it is unreasonable to expect disabled students to rely on these to navigate an inaccessible system. It is worth noting that many of these barriers have disproportionate impacts on students who are multiply marginalized; intersections with race, age, culture, gender identity, financial situation, and language are especially significant.

As it stands now, students are required to take on additional burdens to receive basic accommodations to address their disabilities. It is imperative that these barriers are addressed holistically, not solely from a policy level, to make the University of Waterloo more equitable for disabled students.

VI. References

and Society. 18: 429-450.


8. Anonymous contributors [Interview]. Interviewer: Ness Lamont. The author thanks them all for their frank and honest discussions.


Designing a Cross-Cultural Engagement Program for Migrant and Japanese Children in Japanese Elementary Schools

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Abstract - this research and design project can be divided into two folds. First, to understand the unique and common program experiences of participants and alumni from the Japan Exchange and Teaching Program (JET) and the Japan Overseas Cooperation Volunteers (JOCV) through formal interviews. Second, to design a new cross-cultural engagement program called the “Shared-Curriculum (SC)” that leverages the experience and knowledge of international program participants and alumni with the aim of assisting teachers and empowering culturally and linguistically diverse (CLD) children in their classrooms. Through interviewing JET and JOCV participants and alumni, common themes such as challenge and support emerged. These common themes were integrated with existing initiatives in immigrant children education in designing the structure and content of the SC program. This conference paper provides an overview of the interview findings that inspired the design of the program. The details of the program itself can be found in the accompanying “Activity Playbook” which outlines the details of the program, necessary considerations, and how it may be pilot tested. (Participants and alumni from the two international programs will be collectively referred to as JETs & JOCVs in this paper)

I. Motivation and Background Information

The impetus for this project came from the needs of three different groups of people, students, teachers and international program participants (JETs & JOCVs)

First, currently in Japan schools, certain CLD children not only struggle to catch up to their peers academically but they also have a hard time making friends because of the language barrier. While certainly not all CLD children experience difficulties in their school lives, those who do tend to experience different degrees of social isolation and academic underperformance. We should find solutions to help students overcome their linguistic barriers, facilitate understandings to rediscover each other, and help build relationships between the majority Japanese children, CLD children, and their teachers.

Second, public school primary and secondary teachers in Japan are pressed by their respective school boards to provide support for CLD children in their class as well as integrate special topics such as international understanding to their teaching in response to internationalization. However, teachers are often paralyzed for taking full responsibility for CLD children under their care because they have only been educated and trained to work with children who are native to Japan. In addition, many teachers also struggle with effectively incorporating topics such as cultural understanding intercultural communication, multicultural coexistence into their lesson planning and delivery. Teachers in such situations need support in designing and delivering interesting and meaningful cross-cultural engagement content that will help build mutual and cultural understanding in and amongst students.

Lastly, the number of JOCVs & JETs have been accumulating since the inception of the two programs. Many of these individuals have valuable knowledge and interesting experience of starting and living a life in a foreign country which has great educational potential if leveraged in a creative and organized way.

Given the three needs that I identified, I was motivated to design a cross-cultural engagement program that would allow JETs & JOCVs to support
and inspire students and teachers.

II. Needs as Solution

III. Method and Data

I used both online and in-person interviews to collect data for this project. Since there was no mystery to my project, interviews were solely used to inform the design component of my project. All interviews were divided into three parts:

1. Questions about program experience
2. Explanation of the SC program concept
3. Discussion on the potential design, content, and logistics of the program

Fig 1. The three circles represent the three groups. Their colors represent whether they can give support or are in need of support. The star represents the program which would enable communication and collaboration between the three groups.

IV. Findings

The word “challenge” used here should be understood as a spectrum of difficulties experienced by JETs & JOCVs when starting their lives in a foreign country rather than anything insurmountable. Similarly, the word “support” used here loosely refers to actions of others that assisted JETs and JOCVs in their daily lives that made them feel confident, welcomed, or accepted to be in their communities.

The idea here is to extrapolate these common themes to show that, despite being dispatched to different locations with different purposes as JETs and JOCVs, we can all experienced challenges when we start a new life in a foreign country. Similarly, despite being dispatched to different locations with different purposes we all received support, which was essential in the success and growth of each participant and their community. Such understanding can then be further extrapolated help participants to better understand and empathize with CLD students in their classrooms by showing that, regardless of where we are from and where we go, we will encounter unique and common challenges when we move to a new country, and support from the community and from each other is incredibly important for the newcomers and the future of community itself. The major category of challenges and support are summarized below.

“Challenges” (Theme)

Challenges as a Result of Differences in Common Sense and Value. Generally speaking, some of the most common challenges participants experienced by JETs or JOCVs came from a difference in common sense between themselves and their colleagues or students.

Challenges as a Result of Language Barrier and/or a Lack of Local Knowledge. Participants from both programs voiced their frustrations to about their inability to communicate and inability
to complete simple tasks without local knowledge in their early months of arrival. Language proficiency and local knowledge are categorized in one group because both are needed in successfully navigating one’s daily life in a foreign country.

**Other Challenges.** Challenges in this category are complex challenges which often do not have a single cause but have multiple reasons that are specific to the context which it took place, E.g., having difficulty in collaborating with colleagues who are set in their ways.

**“Support” (Theme)**

**Support from the Program** (including local program participant networks). The biggest source of support and preparation that individual participants received before and after being dispatched to their locations often came from the program organization itself and from other program participants living in the same area. Support in this category often provided support in helping individual participants get set-up for their work.

**Support from local colleagues.** Support from this category often came in the form of practical or procedural assistance which helped newly arrived participant to better function or become more prepared in their daily lives and work related-tasks.

**Support from others** (students, student parents, other locals). Often times program participants have received help in various forms from local residences, such as host family members, students, and acquaintances met during community events or volunteering.

V. 6 Step Transformative Learning Process

Under the overarching theme of “life in a foreign country”, a 6 step learning process was developed (Fig.. 3). It outlines how to leverage higher level commonalities shared by JETs and JOCVs to guide students into a better understanding of the lives of their CLD peers. Students will be involved in activities that prompt reflection about the importance of understanding, communication, and support for newcomers through learning about the lives of past Japanese migrants and the experiences of the participants themselves. The learning process incorporates the theme of “challenge” and “support” identified earlier.

**Fig 2.** “Challenge” and “Support” were the two main themes shared by both JETs and JOCVs identified through interviews. Each can be further organized into three different groups and extrapolated to facilitate understanding of CLD students in the classroom.

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**Fig 3.** The six steps are first, to learn about the lives of past Japanese migrants. Second, to learn about JETs & JOCVs as individuals and about their mission. Third and fourth, to learn about the unique and common challenges they have experienced and the support they have received. Fifth, to learn about the lives of CLD student in the classroom. Sixth, brainstorm initiatives that support CLD children and newcomers in the community.

VI. Discussion

The next step for the SC program is to conduct pilot testing and obtain feedback to adapt to the local context where it is implemented. Pilot testing could be initiated by JETs & JOCVs or Japanese teachers who are currently employed in local schools or school boards.

In terms of future research, there is a need to develop a program evaluation framework. A robust program evaluation framework will allow for continuous improvement while generating evidence of its effectiveness that could be presented to other schools for adoption and for future research in the area of immigrant and migrant children education and integration.
Strangers, Suburbia and Social Change: Seventy Years of the Babysitter in Film

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Abstract - The American Babysitter has gripped the cultural imagination since its social advent in the 1920s. Traditionally depicted as white, adolescent, middle-class and female, the babysitter has made her way through seven decades of feature film, ranging in genre from drama and comedy to horror. At this time, there is no research that is dedicated exclusively to the analysis of this varied body of work. This project seeks to gain an understanding of the role of the babysitter in the American collective imagination and to account for her sustained filmic presence. My research consists of a survey of babysitter-centered films produced in the United States between 1948-2017, which has been analyzed in order to identify common themes, plots, and conflicts. Filmic analysis is complemented by historian accounts of related 20th century events: post-war suburbanization, historical perceptions of real-life babysitters, and the changing status of women in society. The major finding of my research is that babysitter films can be categorized into three basic story lines, within which the babysitter alternates between endangering the family structure and protecting it. All of these story lines conclude with the preservation of the nuclear family. This paper identifies the babysitter as a “threshold figure” – at once within and outside of the family – whose liminal nature makes her an accommodating body over which various social anxieties can be inscribed. From her privileged position in the familial home, she helps audiences explore anxieties such as the trustworthiness of strangers, changing gender roles and ideals, and the threats of modern life. The proposed reasons for the babysitter’s on-screen longevity are: 1) her liminal, dynamic character, and 2) the persisting relevance of the themes and conflicts inherent to her stories.

I. Introduction

Babysitter films are by no means a cohesive unit. They are produced sporadically in various genres by directors who do not appear to be in dialogue with one another. This makes the consistency of their conventions all the more remarkable, yet more challenging to study.

The principal challenge of studying these films is their lack of critical mass. Bursts of popularity (say, the slasher craze in the 1970s and 80s) stand out against prolonged periods of inactivity. Additionally, many of these films are low budget productions (i.e., independent film, made-for-television) and the extent of their viewership is unclear. However, the commercial successes of studio films that tell the higher budget versions of these “sitter stories” (e.g., The Hand that Rocks the Cradle) indicate their resonance with audiences. The very fact that these stories continue to be told seventy years on should not be overlooked. Recent releases such as The Babysitter (2017) and Tully (2018) suggest the babysitter’s persisting appeal.

Perhaps these repetitive and often simplistic stories might strike scholars as unworthy of attention; however, this study seeks to grasp those static elements in order to understand their resonance with a public who keeps tuning in. This paper also aims to investigate the more dynamic elements of these narratives: after all, a body of film work spanning several decades can not avoid reflecting social change and narrative evolution.

At the heart of this study are the questions of what and why: what is fundamental to the
babysitter and her stories, and why they continue to engage audiences seventy years on.

II. Methods
My research began with a qualitative content analysis of “Babysitter Movies”: films in which the babysitter is a central character whose actions or presence drive the plot. This criterion narrowed my sample set to films produced between 1948 and 2017. The twenty films in my analysis are all English language, feature length, non-documentary, and produced in the United States. They were sampled regardless of their genre or whether they were produced for theatrical or television distribution (i.e., “made-for-T.V.” movies).

My sampling was restricted by time and resource constraints: babysitter films are relatively few to begin with, with some titles no longer circulating in the public domain. Regardless, I was able to find a body of film texts that was broad enough to reveal patterns during analysis.

My content analysis was based on the Grounded Theory Method, beginning with observation instead of hypotheses. During my film survey I practiced open coding by merely watching the films and taking detailed notes of their plot events. This allowed me to avoid preconceived goals for my findings and simply collect as much raw data as possible. Once a substantial amount of films had been surveyed, I compared my notes and searched for patterns and similarities among the various plots, themes, and characterizations. To facilitate this, I reduced each plot structure to its essential events and began coding traits attributed to each film’s characters (Fig. 1). Recurring themes such as “infidelity”, “manipulation”, and “inadequate parent” were also coded.

Data collection was complemented by an interdisciplinary literature review spanning film, folklore, and history. My inquiry into film theory assisted me in finding a theoretical framework through which to analyze the accumulated body of film texts, and folkloric studies proved illuminating due to the urban legend roots of many babysitter films. Historic texts provided insights on 20th century events relevant to the babysitter character, such as her real-life social advent, post-war suburbanization, and the changing status of women in society.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>“Joanna”</td>
<td>Violent</td>
<td>Non-violent</td>
</tr>
<tr>
<td>“Laurie”</td>
<td>Delusional/Deranged</td>
<td>Mentally stable</td>
</tr>
<tr>
<td>Attempts seduction</td>
<td>Abstains from</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sexual activity</td>
<td></td>
</tr>
<tr>
<td>Negligent (of child)</td>
<td>Responsible (of child)</td>
<td></td>
</tr>
<tr>
<td>Harms child</td>
<td>Saves child</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Coding the characteristics of the babysitter in drama-thriller The Babysitter (1980) and slasher-horror Halloween (1978). Traits tend to concern the babysitter’s sexuality, mental stability, and moral capacity.

III. Results
The first major finding is that babysitter movies spanning various decades and genres can all be split into three distinct story lines or “structures”. I have labeled these story lines A, B, and C. Naturally, some individual movies will show variation, but the three structures can generally be categorized as such:

“A” Story Lines: These typically fall into the drama/thriller genre. Here, the young, female babysitter is a threat that must be eliminated in order for the family to preserve itself. These are the stories with “bad” babysitters who attempt to sabotage the family in predictable ways: seducing the father, sabotaging the marriage, undermining parental authority, or harming the children.

“B” Story Lines: Often the basis of horror films, this story involves young, female babysitters who are tormented on the job by a malicious external force (e.g., the infamous maniac with a telephone). The babysitter is not the source of threat in “B” stories, and she is responsible for protecting the family and herself from harm. In these films, “good” babysitters succeed in saving the children, while “bad” babysitters are negligent, incompetent, or otherwise unable to protect those in their charge.

“C” Story Lines: are comedies, musicals, or family movies where the babysitter character is most diverse: men, older nannies, and pre-adolescent girls are equally likely to be found in the caregiving role. In “C” stories, the babysitter initiates positive change within the parents and children and is
responsible for their unity at the conclusion. It is the only story line in which the babysitter has the potential to fully integrate into the family unit, either as permanent hired help or the replacement mother/wife.

<table>
<thead>
<tr>
<th>Story Line “A”</th>
<th>Story Line “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Babysitter enters the family unit.</td>
<td>1. Babysitter enters the family unit.</td>
</tr>
<tr>
<td>2. Babysitter is unknown to the family.</td>
<td>2. An external danger threatens the family.</td>
</tr>
<tr>
<td>3. Babysitter threatens the family structure.</td>
<td>3. Babysitter combats the threat.</td>
</tr>
<tr>
<td>4. Babysitter is expelled from the family.</td>
<td>4. The threat is eliminated.</td>
</tr>
<tr>
<td>5. Family unites.</td>
<td>5. Family unites.</td>
</tr>
</tbody>
</table>

Fig. 2. The fundamental structures of babysitter story lines “A” and “B”. Each story line involves a babysitter, a threat to the family, and a resolution of conflict that results in the preservation of the family unit.

Negatively coded babysitter characteristics (e.g., violent) are commonly associated with “A” stories, while positive traits (e.g., responsible) tend to appear in “B” and “C”.

Secondly, consistent themes have been identified across stories. Some examples include the threat of strangers, changing roles of women in society, parental authority, and preservation of the nuclear family. These themes appear to be fundamental to babysitter stories, while others appear only briefly and seem to reflect the social anxieties of the film’s era of production. For instance, post-war psychological trauma, 1960s adolescent rebellion, and 1980s working mothers and divorce have all been featured.

Thirdly, analysis confirms a convention that is absolutely intrinsic to these stories: their cultural setting. The babysitter exists in the suburbs – or, occasionally, another non-urban location indicative of wealth, such as a lake house – where she tends to white, middle-class, nuclear families. This convention does not vary, regardless of story line, genre, or decade.

This diverse body of films is united by its cultural milieu: a specific cultural context where inherent thematic conflicts can be played out. The babysitter’s milieu is the white, middle-class world of the suburbs. In this context, American families can face and defeat a myriad of modern threats that are all amplified through the babysitter.

The babysitter’s onscreen staying power can be attributed, at least partially, to her being what feminist scholars have deemed a “threshold figure”, existing somewhere between “within the family” and “outside the family” \(^2,^3\). She inhabits both the suburban home and the outside world and can move effortlessly between the two; therefore, essential to her character is the threat of external danger and the unknown. These films imply that the allure of the babysitter is her potential to go either way: she can be either a domestic angel or destructive force, repel danger or attract it, and bring the family together or tear it apart. Her character is decided through a series of binaries (e.g., trustworthy/manipulative, sexually experienced/virginal) which in turn determine which story line she will be placed in: A, B, or C and how the film’s themes will be treated.

The babysitter’s stories continue to be told because the anxieties that she embodies persist. They can accommodate contemporary social strains as they appear: adolescent deviance, rising crime, increasing divorce rates and failure of marriage, as well as much older fears such as the danger of strangers and the anti-feminist distrust of young women.

Analysis indicates that all babysitter story lines end with an affirmation of cultural institutions: the police typically remove the threat and then the family reunites. Order is always restored; however, the thrill of these films comes from the first ninety minutes spent exploring what chaos might break out in a seemingly normal environment. Above all, the babysitter character provides a dynamic tool for exploring these anxieties and “what if” situations that viewers keep tuning in to watch.\(^4\)

V. References

Industrial Growth in Ethiopia

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Abstract - To many, made in China labels bring to mind images of sweat shops. While this may be true in some cases, industrial growth can be a key to increasing the quality of life within the developing world. This growth has been seen in many countries in the east such as Korea, Vietnam, China and India. To date this type of growth has not been seen in Africa to the same extent. My thesis tested growth in several industrial sectors of Ethiopia’s economy in an effort to gain a better understanding of industrialization within East Africa. To test this growth I look at both production data and export data in an effort to gain an understanding of of which demand factor is driving the growth. The production data is used from the Ethiopian national bank while the export data is taken from the Atlas of Economic Complexity. International economic policy in Africa has looked very different then the ones found in Asia with African countries using more tariffs to protect their domestic industry. My paper compares growth in sectors with high tariffs with that of industries with low tariffs. My paper finds that growth is higher in sectors with lower tariffs. It is possible that this is because growth is already high in those sectors and thus they don’t need tariff protection.

I. Introduction

Industrial growth in the developing world is often thought of as a negative phenomenon. People in the west tend to picture sweat shops that are unsafe and pay destitute wages. While this may be true in some cases, industrialization is a key avenue for economic growth in less developed countries. The alternative in many cases is small scale agricultural jobs that pay even less then ones in manufacturing (Blattman, 2017).

Successful industrial growth has many examples in Asia. The fantastic rise of China, India, Vietnam and other countries in the far east show the power that industrial growth can have. Industrialization helped to transform these countries on the global stage and helped to boost the quality of life domestically (Baldwin, 2016).

To date we this type of development has not been seen to the same extent in Africa. This paper aims to get a better idea of the industrial development in Africa by examine industrial growth in Ethiopia. Ethiopia is a useful country to examine as it has many factors in common with other African countries (Zewde, 2002). Thus the findings will be relevant outside of the country. This paper does this analysis while examining protectionist import tariffs adopted by the Ethiopian government.

II. Methods

This study was completed entirely using open access data from sources such as the Organization of Economic Complexity, the United Nations Commodity Trade and the Ethiopian National Bank. Finding data for domestic activity within a developing country is difficult due to a gap in reporting, the data that is available is also less trustworthy. For this reason, data from international sources is greatly preferred. The data used to calculate export growth was taken from the Organization of Economic Complexity (OEC) (Ethiopia, 2018). The tariff data was collected from Ethiopian government websites that are used to promote exports to Ethiopia (Imports and tax, 2018). The website used the most the 2Merkato business portal (Custom duties, 2009).

Nominally, tariffs in Ethiopia are very simple. As a member of the COMESA trade bloc, they have a single tariff for imports from outside the trade bloc
that is as follows: 0% for capital goods and raw materials, 15% for intermediate goods and 25% for final goods. The reality is that the tariffs are actually much more complicated and are broken down into 5 separate sections: import duty, excise tax, value added tax (VAT), surtax, and withholding tax. These rates differ between different imports with some qualifying for exemptions for entire sections of the import tariff.

<table>
<thead>
<tr>
<th>Import Tariff for Select Products in Ethiopia</th>
<th>Duty</th>
<th>Excise Tax</th>
<th>Value Added Tax</th>
<th>Sur Tax</th>
<th>Withholding tax</th>
<th>Total Tariff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee (0901)</td>
<td>0%</td>
<td>40%</td>
<td>15%</td>
<td>10%</td>
<td>3%</td>
<td>62%</td>
</tr>
<tr>
<td>Motor Vehicles (8703)</td>
<td>35%</td>
<td>30%, 60%, 100%</td>
<td>15%</td>
<td>10%</td>
<td>3%</td>
<td>198%, 267%, 450%</td>
</tr>
<tr>
<td>Aircraft Parts (8803)</td>
<td>15%</td>
<td>30%</td>
<td>15%</td>
<td>0%</td>
<td>3%</td>
<td>130%</td>
</tr>
<tr>
<td>Knit T-shirts (6109)</td>
<td>35%</td>
<td>40%</td>
<td>15%</td>
<td>40%</td>
<td>3%</td>
<td>152%</td>
</tr>
<tr>
<td>Gas Turbines (8411)</td>
<td>15%</td>
<td>30%</td>
<td>15%</td>
<td>10%</td>
<td>3%</td>
<td>154%</td>
</tr>
<tr>
<td>Other Footwear (6406)</td>
<td>35%</td>
<td>10%</td>
<td>15%</td>
<td>10%</td>
<td>3%</td>
<td>152%</td>
</tr>
</tbody>
</table>

To help streamline this paper’s analysis, sections of Ethiopia’s economy were selected for in an effort to best represent the different sections of Ethiopia’s economy. These sectors then had their final tariffs calculated. The six sectors selected are coffee, motor vehicles, aircraft parts, knit t-shirts, gas turbine and other footwear. These different exports also have different tariff profiles that are compared in the chart above.

III. Results

All six of the products examined have experienced significant growth within the last sixteen years. This is not surprising as the entire Ethiopian economy has been growing over this period. This growth is driven by increasing exports.

Some of the products that have the highest protection tariffs seem to be exhibiting promising growth. Footwear and clothing have moderately high tariffs and have been growing regularly over the years sampled. These tariffs may be helping with this growth. This seems to be true for less complex products but less so for products such as vehicles and turbines. Vehicles, which have by far the highest tariff of the group, has some of the lowest growth rates compared to the other sectors. Gas turbines on the other hand have grown much more quickly despite their amounts falling nearly to zero in 2007 and 2010. Aircraft parts have also seen similar growth levels.

It is very difficult to determine causality with the data at hand. The sector with the lowest tariffs from the sample has the highest growth but its growth may mean that it doesn’t need protectionist tariffs and not that low tariffs are causing the growth. The same is true for automobiles, the industry had slow growth before the tariffs were instituted. It is possible that automobile growth may be slow even slower without the tariffs.

IV. Discussion

What my study shows is that sectors with tariff protection can experience growth similar to that of sectors with less tariffs. The sectors with higher
tariffs did not see a growth pattern that was much different from that of other sectors in the economy. This finding is congruent with development policy in many global south countries. Countries such as Ethiopia have stated that their domestic industries need to be protected from foreign imports (Ng, 1997). The argument is that these products destroy the local industry before it has time to evolve to a point where it is competitive. Results such as the possible for a factory to switch from making t-shirts to other cloth garments. In my methodology, a swap from t-shirt manufacturing to another product looks like decreasing manufacturing even when that is really not the case. Further studies could improve by taking these factors into account.

### V. References

Quiet (But Engaged) Participation

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Abstract - In many small classes, students have a chance to share their thoughts by engaging in class discussions. While this is motivating for some, it can be terrifying for others. Nonetheless, it is common for instructors to gauge understanding and assign grades by assessing students’ verbal contributions to class discussions. This way of measuring participation raises several questions about inclusivity. For example, what about students who, for a variety of reasons, struggle with speaking up in class but excel in other ways of contributing to discussion? Is there an assumption that quiet students have less to contribute than those who are comfortable with, and able to negotiate, the demands of verbal discussion? Is it fair to base participation grades on the ability to speak up in class in front of peers? How can instructors engage students in discussion and measure participation in ways that account for diversity?

I designed and performed a workshop through the Centre for Teaching Excellence for instructors to inform them about the diversity of students and different ways in which students participate in their classrooms. Through Universal Design for Learning principles, I demonstrated different discussion, writing, and audience response alternatives for instructors to consider in their classes. By being flexible in their grading or surveying students about how they prefer to be assessed, instructors can evaluate the same requirements from full class participation while being more conscious of those who are not able to participate in this way.

I. Introduction

Instructors often require their students to participate in class for a portion of their grade. This is usually done in a very typical way. According to Rocca, participation is an engagement activity that can be divided into five categories: Attendance, group skills, communication skills, preparation and contribution to discussion.1 Students are often required to complete a reading before class and during the class they are asked to discuss their thoughts. According to Rocca, participation can also be defined as “the number of unsolicited responses volunteered.”

This however, may not be the most effective way of gauging participation as there are many students who will not participate in this way. This is due to many different factors. The first factor is class size. If the class is too large, students may feel uncomfortable, this may hamper participation.1 However, if the class is too small, some students may feel like they are unable to “hide” among their peers, and in this sense, they are less likely to participate.1

The second factor that may affect participation is classroom apprehension. This can be defined as the fear of feeling inadequate amongst their peers.1 While the instructor may be intimidating, students often feel this apprehension toward their peers more than toward the instructor.

Another factor that affects participation is classroom setup. This might be difficult to change especially since many lecture halls at the University of Waterloo have fixed tables. However, participation is more conducive when tables are in a “U” shape or small groups rather than long rows.1

Instructor presence and style may have an impact. Students are less likely to participate if the instructor cold calls students, asking them to speak without volunteering. Furthermore, if the instructor interrupts the student or contradicts them in front of their peers, they will feel more inadequate.1

Culture and language has a large impact. If a
student is from a non-English speaking country, they may feel uncomfortable with the language barrier. Aside from language barriers, there are cultural differences that can hinder participation. In North America, we conflate speaking and learning, whereas in East Asian cultures, learning is often linked with introspection.\(^2\)

Finally, personality can affect participation. Extroverts expand ideas through discussion, which can lead to the instructors seeing these students through the halo effect, where the instructor assumes all other qualities of these students are positive after one positive quality is observed i.e. when they participate in class discussion.\(^3\) Introverts, however, tend to develop thoughts more thoroughly before speaking up, causing them to participate less.\(^3\) Apart from introversion and extroversion, shyness can hinder participation. Shyness according to Crozier is a personality trait that manifests when someone is the centre of attention or when speaking to an authority figure, causing them to withdraw.\(^4\) Furthermore, these students perceive themselves as not participating as much as other students when participation is based around large discussion.\(^4\)

Any and all of these factors affect student participation. To hear these students’ voices, we need to find a way to accommodate everyone.

II. Methods

Rather than specifically accommodating certain students who are unable to participate in front of the class, instructors should use Universal Design for Learning principles to make the course more accessible to everyone. Universal Design for Learning has three main guidelines: multiple means of representation, multiple means of expression, and multiple means of engagement.\(^5\) Multiple means of representation describes the ‘what’ of learning. This includes providing multiple means of presenting the lecture content by including online images, videos or tools.\(^6\) Multiple means of expression discusses providing alternatives to the students that help them engage with the course material.\(^5\) By inserting this principle into a course, students will be able to engage with activities that they are better geared toward them. Finally, multiple means of engagement, according to Gore, is finding ways that the course material is relevant to the student and allowing them to choose ways in which they would like to engage with the material, especially for projects and assignments.\(^5\) Along with using Universal Design principles, if the instructor is working in a small class, mainly between fifteen to twenty-five students, they may be able to be more flexible in their grading scheme. Allowing students to choose how their grades are allocated can integrate flexible learning.\(^7\) This can be done by providing no more than three alternative grading schemes that students can choose from. In a small class, each student would be able to choose a grading scheme that they believe would suit their strengths. This could be as simple as grade dropping or more complicated through alternate assignments. By allowing students to choose, instructors can promote self-regulated learning. A study conducted by Rideout in 2017 showed that students that chose alternative grading schemes did not suffer in the overall mastery of the course content.\(^7\) By being flexible in the grading scheme, as well as applying Universal Design for Learning principles in the course, instructors are able to reach a broader range of students. The most effective way of creating a course that is more conducive to all students is by providing alternatives to typical in-class participation.

III. Results

There are many different alternatives that can be employed in a small classroom that would engage many students. These can be divided into four major categories: Discussion based alternatives, writing based alternatives, online or audience response-based alternatives, and engagement activities that can prompt further discussion. As it may sometimes be necessary to hear the students speak, for example in a language course where diction and pronunciation are important factors or a philosophy course where arguments must be made verbally as well as on paper, there are many discussion-based alternatives that instructors can use in their courses. These can include activities like Think-Pair-Share or small group discussions that are easier to implement with a limited amount of time. If instructors have more time and space in their class, they can employ activities such as jigsaw\(^8\) or a gallery walk\(^9\) among many other discussion-based alternatives. If speaking is not an essential requirement of the course and is not being actively graded, as it would be in a public speaking course, there are writing based alternatives and instructor can employ. Some of these for example

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include asking students to submit log sheets where they explain what they did say in class, what they didn’t say and why they did not say it. This allows instructors to hear more form those who did speak as well as from those who preferred to stay quiet. Online and audience response-based alternatives include iclickers, Learning Catalytics, Poll-Everywhere and Today’s Meet where instructors ask their students questions and, while they do not hear an elaborated response from everyone, they are able to gauge understanding of concepts taught in class. Other online alternatives include running discussion boards during and after class that allow students to explain their thoughts without having to speak up. If students are required to present a project in class and oral skills are not an essential requirement in the course, allow the alternative of having the student speak one-on-one with the instructor or allow them to record their presentation at home and play it during class. Finally, the last group of alternatives is engagement activities that prompt further discussion. These include games like dotmocracy, sticky-note clustering and opinion line up as well as others where students are able to write their own thoughts and cluster them with other students’ thoughts without speaking up. By providing these alternatives, instructors will be able to gain input form a wider range of students.

IV. Discussion

Different students are engaged by different activities and concepts, and by providing alternatives more students are likely to participate, even if it they are typically less inclined to participate in classical participation models, like asking them to speak during full-class discussion. Instructors cannot always tell based on body language alone whether or not a student is engaged. Implementing these alternatives should require some considerations. Firstly, what are the learning outcomes of the course? Is it essential for students to speak up in class or speak in front of the entire class? If it is essential, presentations can still be implemented in the course, however, if it is not essential, there are many alternatives that can be implemented to engage all students.

Secondly, how feasible is the activity? Many engagement activities require a lot of space and time and if the classroom is small, this may be more difficult. Furthermore, if these activities require more planning, does the class have TA support or not? This may affect which activities instructors choose to implement.

Thirdly, only one or two alternatives should be used each class. Though this depends on the duration of the lecture, if there are too many different activities, then this can overwhelm students.

Finally, there are many benefits to participation and it should not be cut completely from the curriculum. Rather than simply asking students to raise their hands and explain their thoughts on the course content, inform them at the beginning that there will be alternatives and implement a few of these alternatives throughout the term. By providing alternatives, instructors can reach more students and learn diverse perspectives that may otherwise have gotten lost among louder voices.

V. References

Emotional Reasoning: Why Analogical Arguments Are Useful for Promoting Veganism

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Abstract - Is there a way for vegans to change how people feel about our treatment of animals? This research project is an investigation into a particular form of argument that may be the answer: arguments from analogy. While Peter Singer is known for his utilitarian arguments for animal welfare in the book Animal Liberation, what seem to truly be effective in changing people’s minds are instead the parts of the book in which he makes comparisons between animals we give moral status to and animals that we do not. These comparisons are analogies that create an association between the two subjects, and have the power to make people see these subjects in a new light. As I have a strong interest in promoting veganism for the sake of our fellow earthlings, I decided to look into why these arguments have such power in order to learn how we can use them even more effectively in the future. By looking into cognitive science research, I’ve found that the key factor making arguments from analogy often more effective than arguments from first principles is emotion. Analogical arguments allow for the incorporation of emotion into reason, and although we often see reason and emotion as entirely separate, they seem to be interlinked. Arguments from analogy thrive by tapping into both reason and emotion, and should be used by vegans to get people to change their perceptions of animals for the better.

I. Introduction

Convincing people to do something is one thing, but convincing them to truly care about something is another. This is a hurdle often faced by proponents of veganism when they wish to promote the lifestyle to others—how can we get people to care about the injustices done to animals solely for our pleasure, let alone get them to recognize these things as injustices at all? While handing out informational flyers and pamphlets can be useful for disseminating information about how we unjustly use animals, it appears that an effective way of getting people to really care about that type of information is by presenting them with arguments from analogy.

This project is an investigation into just why that is. Why does taking a source that someone cares about—such as their pet dog—and comparing it to a target—such as a pig in a factory farm—seem to evoke a similar kind of empathy for the target? Both philosophical and cognitive science research will be discussed and evaluated, as both back up the efficacy of analogical arguments in getting people to relate different subjects. I argue that this means vegans should try to incorporate analogies into their animal advocacy efforts as much as they can if they wish to truly make others see animals—and the injustices done to them—in a new light.

II. Why Veganism?

Vital to any discussion involving an ethical standpoint is a description of what that standpoint is. Veganism is defined by The Vegan Society as:

A philosophy and way of living which seeks to exclude—as far as is possible and practicable—all
forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of humans, animals and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals. (The Vegan Society)¹

In short, veganism is much more than a dietary choice. It’s an ethically based way of living that aims to reduce the suffering of animals. While it’s impossible to fully implement veganism worldwide without humans ceasing to exist, this doesn’t mean veganism is pointless as an ideal; it’s still valuable to shoot for the stars even if we fall and land on the clouds instead. To fail in doing so would entirely ignore the very real plight of millions of sentient beings.

Several philosophers with different ethical approaches arrive at the same conclusion regarding our treatment of animals. I explore the views of Peter Singer, Tom Regan, and Rosalind Hursthouse and show how despite their disagreements, each of their ethical approaches—utilitarianism, deontology, and virtue ethics respectively—bring them to the same conclusion: the way we currently treat and use animals is not ethically justifiable, and a vegan lifestyle would help minimize their suffering.²,³,⁴

Those like myself who are particularly receptive to appeals to reason may be convinced to adopt a vegan lifestyle by the arguments of Singer, Regan, or Hursthouse alone. But this isn’t the case for many; there are many psychological reasons that appealing to logic simply isn’t enough to persuade some people. For many, arguments require more than one dimension to be convincing, especially if the goal of the argument is to incite an overall lifestyle change. By looking through research in psychology and exploring some of the reasons for this difficulty, as well as cognitive science research, I’ve identified a form of argument that employs not only reason, but the valuable element of emotion as well: arguments from analogy.

An investigation into Peter Singer’s Animal Liberation by associate professor Ramona Ilea at Pacific University identified the significance of how Singer presents examples of animal injustice when trying to change how people see and feel about animals. While the first chapter is centered on reason, she explores the later chapters in which Singer uses comparisons between animals, “crafting good analogies and setting cases side by side”, as is done in “Wittgensteinian tradition”. While Singer is known as a utilitarian, Ilea points out that his utilitarian arguments may not be the most effective arguments he poses in Animal Liberation; rather, his Wittgensteinian comparisons between experimentation on rats and experimentation on dogs are more likely to induce an “alteration in perception” in the reader.⁵

Singer’s analogies linking one animal to another paired with the use of choice architecture to further enhance emotional response (such as referring to animals with pronouns like “he” or “she” instead of “it”) appear to have the potential to improve vegan advocacy tactics. That there’s a more effective way to change people’s minds than by arguing from first principles is an exciting revelation, but what I decided to figure out in this project is not just that analogical arguments work, but rather why they work.

III. Analogy & Emotion

Analogue arguments are special as they use not only reason, but emotion as well. While some people may be swayed into changing their views based on reason alone, the incorporation of emotion adds another dimension to the argument that can have a particularly strong effect on some. By putting two subjects next to each other and comparing them, highlighting what makes them similar and forming a connection between them, you can make people see them in an entirely new light. This is invaluable when trying to change people’s perspectives on animal injustices, for how better to get people to care about the experiences of pigs killed for their meat than by letting them know that a pig isn’t much different from a dog, an animal that they may care for and protect as if it were their very own child?

Of course, a common criticism of such a type of argument is that reason and emotion should be separate. Emotion can’t be used to come to a rational conclusion, because emotions are not rational, so making use of them in an argument is just coercion or emotional manipulation. But what if this isn’t the case; what if our fundamental understanding of
reason and emotion as entirely divorced concepts is wrong?

Newer work in the field of cognitive science suggests that this is the case—emotion shouldn’t be divorced from reason, and in fact, reason may rely on emotion in order to work at all. By exploring Antonio Damasio’s work *Descartes’ Error: Emotion, Reason, and the Human Brain* and various works by Paul Thagard on emotion, analogy, and reason, along with others, I come to show that emotion and reason are interlinked. Analogical arguments use both reason and emotion by being structured in reason while carrying emotive content along, and this is why they work so well when promoting veganism. This makes them a special type of argument, and even though they use emotion, they’re just as legitimate as any other argument that doesn’t.\(^5, 7, 8, 9\)

**IV. Discussion & Ongoing Research**

Based on the research I’ve done, it seems that it would be a good idea for people promoting veganism to use analogical arguments if they wish to get others to rethink their views on animals. Even though arguments from first principles, such as those posed by Peter Singer, Tom Regan, and Rosalind Hursthouse may be convincing on their own, arguments from analogy incorporate the valuable element of emotion, bolstering the strength of the arguments for veganism even further.

This was and continues to be a really interesting area of research for me, as someone who doesn’t usually need arguments to have a strong emotional drive to them in order to be convinced. Learning about the value of emotion intertwined with reason was something entirely new to me, and I’m excited to see how both I personally and how vegan advocacy groups on a larger scale can implement analogical arguments in the future. They are indeed already being used, of course, but with the insight of why they work, I think it’ll be possible to craft even more effective analogies, and to implement them in novel ways that we may not have otherwise considered.

Future research could focus around the actual implementation of analogical arguments to promote veganism through various types of media (e.g. social media, pamphlets, protests) and the collection of data to see how influential these methods end up being. Working with animal advocacy organizations such as *Animal Charity Evaluators* and *Mercy for Animals* would be a great place to start, as these organizations have the resources to figure out—using empirical evidence and data—how to implement analogical arguments most effectively. Such research would be incredibly useful to improve current animal advocacy tactics, and to reduce the suffering of as many animals as possible.

**V. References**

Student Engagement in UWaterloo’s Environmental Sustainability Efforts:
An Evaluation of Policy 53

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Abstract- Places of higher education have a responsibility to foster environmental sustainability because of their unique ability to impact members in their community, on and off campus. As Universities are institutions for research, teaching, learning, and development, they are the perfect place for paving a path towards sustainable growth. Students are often a necessary tool for educating their peers and the University community as a whole on issues of sustainability. However, for students to act as change agents on campus, their involvement, engagement, and collaboration needs to be heavily encouraged by the University. In March of 2017, Policy 53, environmental sustainability was enacted on Waterloo’s campus. This policy aims to further integrate environmental sustainability into a core part of the culture at the University of Waterloo, partially by engaging, collaborating, and encouraging students to develop innovative solutions towards environmental problems. Studies have shown that a lack of evaluation towards sustainability initiatives has led to unsuccessful campus efforts. Therefore, this report aims to evaluate the University of Waterloo Sustainability Policy on its objectives to engage and involve students in sustainable change. Through in-depth focus group interviews with student sustainability groups on campus, this data will point out areas where Policy 53 may not be meeting intended objectives. I will use this information to create policy recommendations to improve the connection and communication between students and administration in areas of sustainability, educate the University community on what initiatives are being led by students, and hopefully highlight areas of opportunity for collaboration between students and administration.

I. Introduction

In March of 2017 Policy 53, environmental sustainability, was established by the University of Waterloo, to further integrate environmental sustainability into a core part of its culture and demonstrate its commitment to sustainability. The policy commits the University to report annually on its progress to achieving goals through their sustainability reports⁶. To ensure accountability, the University has released a sustainability strategy which outlines measurable goals across different areas of this policy. Through this policy, the University has promised to engage, collaborate, and continue to be innovative with students in the area of sustainability⁶. Campuses often need assessment and performance measures, to evaluate the efforts they are making and ensure they are moving in the right direction³. Therefore, I have conducted an adequacy of performance evaluation which will be comparing the performance of the sustainability policy at the University of Waterloo to its intended goals in order to see if the program is meeting its goals or these goals need to be adjusted. I have decided to narrow the scope of my evaluation and focus on the University's
engagement with students in the areas of sustainability on campus because their involvement is necessary for change to occur. Students can be used in a “bottom-up” approach to advocate for environmental sustainability and raise awareness on the issue. That means staff, administration, and especially students need to be educated, engaged, and involved before a policy can succeed and change can occur. However, for students to act as change agents on campus, their involvement, engagement, and collaboration needs to be heavily encouraged by the University. The “bottom-up” approach used in combination with a “top-down” support from University administration has been seen to lead to the most impact. The purpose of my evaluation is to gauge what response the efforts made by University administration are having, if improvements can be made, or if strategies should be altered. My evaluation will hopefully result in a clear idea of how students can best engage with sustainability at Waterloo, supported by faculty and administration.

II. Methods

Primary research was conducted during the months of January and February. Research was gathered through a semi-structured focus group qualitative interviews. The following relevant stakeholders, members of student groups who focus on environmental sustainability, were interviewed:

- Campus Compost
- Sustainability Campus Initiative
- UW Energy Network
- UW Campus Market Garden

These interviews served to explore the topic of the sustainability policy on campus as well as understand the opinions of the effectiveness of the policy and the engagement of the University with students. Each semi-structured focus group was organized around a specified set of questions or themes (the interview guide). The advantages of a qualitative interviewing method design is that it is flexible, iterative, and continuous. The researcher is able to pursue issues in depth and give respondents more freedom to direct the flow of conversation resulting in issues of importance being revealed. The interview guide, which directed the flow of conversation, was divided into different themes, each relating to specific research questions which addressed different aspects of the sustainability policy that was being evaluated.

The interview sample consisted of 4 student groups on campus whose mission was related to environmental sustainability. Each of these groups was also listed on the University’s website as, “Students who are actively engaged in UWaterloo’s sustainability efforts through advocacy, awareness-building, service offerings, or cutting-edge research.” Multiple focus groups were conducted because, “a single group would be too atypical to offer any generalizable insights.” Typically 3-6 executive members of each student group were involved in the focus group. Executive members were chosen specifically because they had more contact with school administration and could adequately answer and elaborate on the questions included in the interview guide. Each focus group lasted between 30-60 minutes and was recorded for later reference and transcription. This research project is an in-depth interview study by which qualitative interviewing is the primary means for collecting data. The collected data is based on personal viewpoints and is therefore subjective. However, it is important to gauge the opinions of students on the sustainability policy and their engagement with sustainability, in order to evaluate its effectiveness. Once focus groups were conducted, they were transcribed into word documents. To draw conclusions, the qualitative data was analyzed using content coding methods such as observing patterns in the transcriptions and identifying overall themes in the data. The researcher reads and
rereads a passage of transcription, in search of key concepts identified by the interviewees. From these statements the researcher is able to develop an understanding towards the attitudes of different issues. Once common themes are seen between the sets of data, or the different focus groups, a final conclusion can be made towards the research questions1.

III. Analysis

At the University of Waterloo there are many student groups who are actively engaged in making a difference in many different areas related to sustainability. Sustainable Campus Initiative, or SCI, is a student-run group on campus who focus on education, advocacy, and distribution of sustainable events and services to members of the UWaterloo community. They are also a FEDS run service which means they are deeply tied to and supported by the University. SCI acts as a liaison between the University administration and the students here at Waterloo. This close connection to the students allows SCI to evaluate what sustainable needs are wanted on campus, try out new events and programs, and bring these ideas back to the sustainability office. SCI also has teamed up with two other sustainable student groups on campus, Campus Compost and UW Market Garden. Campus Compost focuses on improving waste management at the University of Waterloo. The UW Campus Market Garden is another student group that has recently joined association with SCI. These students advocate for local food systems, organic farming practices, and community based farming at Waterloo. They even operate several gardens around campus and sell the produce back to the St. Paul’s cafeteria and the UWaterloo students at their market sales. The UW Energy Network is a fairly new student group who focus on advocating for a sustainable approach to the energy industry. They offer students the chance to attend seminars, workshops, participate in competitions, and network with industry professionals. Through the analysis and coding of the interviews with the student sustainability groups, major themes emerged from the data.

IV. Recommendations

Comparing these themes to the research questions, several recommendations can be made in an effort to improve the sustainability policy at Waterloo in regards to student engagement:

1. Increase communication between all student groups, the Sustainability Office, and administration
2. Increase communication between student groups (know what initiatives are happening and where they intersect)
3. More education is needed in all faculties for sustainability initiatives to succeed
4. Encourage more collaboration between faculties in areas of sustainability
5. More support and encouragement is needed for some student groups
6. More effort should be placed on the University and student groups to collaborate on common goals
7. The University needs to recognize and utilize students as a resource

Through the implementation of these recommendations, hopefully improvements can be made to the connection and communication between students and administration in areas of sustainability. Administration can also use these suggestions to educate the University community on what initiatives are being led by students, and hopefully highlight areas of opportunity for collaboration between students and administration.

V. Limitations & Further Research

Because of time constraints, not every student group on campus working on environmental sustainability could be interviewed. However, because the members of these groups held key positions within the sustainability conversation on campus and
came from a wide range of academic backgrounds, it can be assumed that their responses are credible and reflect the opinions of most groups on campus. In further research, it could be interesting to interview student stakeholders not involved in sustainability initiatives, to evaluate the engagement they have with this topic on campus.

VI. References
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Retrieved from [http://resolver.scholarsportal.info/resolve/14676370/v02i0002/139_obtcg](http://resolver.scholarsportal.info/resolve/14676370/v02i0002/139_obtcg)
I. Introduction

It is established that the library is an important resource for students, and library use has a positive impact on their performance\(^2\). Libraries employ a large body of staff members to provide a variety of resources that students can access, from online databases to in-person consultations and research assistance. Despite the variety of services and products available to them, many students do not take advantage of these services, not because they aren’t useful, but because they simply don’t know about them\(^3\). Many of these resources are expensive and the expense is wasted when students don’t know about them, and so both the library and students are impacted. As a result, it is important for libraries to market these resources and inform students of the options available to them.

The University of Waterloo Library supports a number of promotion initiatives, including book displays, events, social media and advertisement to promote resources and services. Additionally, to increase student engagement, the library has created the Library Ambassador program, piloted in May 2016\(^4\). Library Ambassadors are students hired to run events, create social media content, and help with outreach initiatives.

The purpose of this study is to understand what student engagement initiatives are being tested by academic libraries, to identify successful strategies and recommendations for engaging students and promoting the library that can be applied to the Library Ambassador program to increase their efforts and build upon the goals of the program. These goals remain in accordance with the mission of the University of Waterloo Library to foster an environment of intellectual freedom and curiosity\(^5\).
Programs like the Library Ambassadors are important for helping with these goals to benefit both the library and its users. This is a filler text that will be used in place of the actual text which will be much more informative about the information to be provided in this section.

II. Methods

This study is composed of a literature review and a supporting case study. The literature review aims to understand initiatives and strategies used by other academic libraries to engage with students. The case study contrasts the results of two Library Ambassador projects, primarily run through the library’s social media, to test the effectiveness of different engagement techniques.

Each of these projects focused on the promotion of Waterloo’s fiction book collection called “Waterloo Reads”. The first project involved recruiting students and staff to recommend a book from the collection by writing a review which was posted to the library’s social media accounts along with a photo of them holding the book. Participants were rewarded with a small gift bag. The posts were posted weekly over the course of seven weeks. The second project involved asking students to guess the title of a book communicated through a series of emojis. Books were selected from the Waterloo Reads collection to advertise the collection. Each guess was entered as a ballot into a contest to win a gift card. Emoji riddles were posted daily over the course of one week.

Data was collected on how many people interacted with these posts on social media to gage the level of uptake from the community of followers. The case studies were analyzed based on the impressions, indicating how many people saw a post, and the comments, indicating how many people actively interacted with the post. Both case studies were run on Instagram, Facebook and Twitter, through the library’s social media platforms. The data collected from the posts is illustrated in the tables on the right. It should be noted that two of the posts in the first case study, posts 6 and 7, were not posted on Instagram due to extenuating circumstances, and therefore no data was recorded.

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<th>Post #</th>
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Table 1. This table displays the social media data collected for the book recommendations series of posts. Number of impressions (I) and comments (C) were recorded.

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Table 2. This table displays the social media data collected for the emoji riddle contest series of posts. Number of impressions (I) and comments (C) were recorded.

III. Results

The literature contained many articles written by librarians, detailing their experiences with engaging students. The literature shows the importance of first understanding what resources students use and which ones they know about through a needs assessment or surveys like the National Survey of Student Engagement (NSSE). There were also case studies promoting the development of an action plan in accordance with your mission statement or library’s goals. There are many
strategies for both in-person and online promotion, but key themes involve creativity and entertainment to get students excited, plus offering incentives like contests. Additionally, many of the studies highlighted the importance of direct contact between students and library staff. Some sources also stress the importance of the library being a part of the larger university community and making connections with staff both outside of the library, but also making connections between library staff to promote collaboration.

The case study analyzed two library ambassador term projects run through the Library’s social media to contrast the different types of engagement methods and the impact these methods had on the success of the projects. In the first project, the engagement of students is passive, as can be seen by the high number of impressions compared to the lack of interaction through comments. This stands in contrast to the second project, which saw active participation with a total of 34 comments. It is important to note that comments create visibility through user networks, and therefore may increase visibility and increase potential engagement through social media.

IV. Conclusions and Further Potential

In conclusion, the Library Ambassador program allows students to get involved with the library to promote the services of the library and engage students. This program is unique in how it allows students the creativity and freedom to create initiatives from start to finish through what they call a “term project”. Other libraries are also taking up the initiative to hire students, with positive results being reported so far. For specific examples, see the Washington liaison program and the promotional videos made by Tsinghua University Library. Libraries can benefit from employing students and allowing them the freedom to be creative and take advantage of their perspectives as students. There are a variety of methods for engaging students, fostering connections and promoting resources that are applicable to the Library Ambassador program. The next step is more exploration into how these observed methods may be incorporated into the program.

Engaging with students on both social media and in-person creates a feeling of community and creates a better awareness of what the Library has to offer. Programs like the Library Ambassadors are starting to become more common as more academic libraries realize the value of using students to promote to other students, and as more research is done, these projects are only becoming more effective.

V. References

Building a Better Online Class: Intentional and Intelligent Course Design for DUTCH

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Abstract Online courses are increasingly common in academia and in the workplace. However, their effectiveness is often hampered by crucial pedagogical and design flaws, since minimal attention is given to modifying the course structure and content to match the online environment. This is especially unfortunate due to the opportunities and benefits provided by hosting educational content on an online platform. In collaboration with the Centre for Extended Learning, my supervisor and I have been creating DUTCH 271: Society and Culture in the Netherlands from the ground up, which will be offered through the University of Waterloo in 2019. This course seeks to mitigate or eliminate many of the traditional issues that plague online courses, such as lack of engagement and depth of content.

I. Introduction
Online courses provide challenges and opportunities for designers, instructors, and students alike. Unfortunately, many implementations of online curriculum do not adequately adapt to the environment. Designers tend to either simplify content to avoid logistical challenges, or simply upload their offline lecture material to a content management system like LEARN. Instructors are not equipped or trained to interact with students and foster an educational community over the internet. Students often see online courses as a way to get course credit without having to put in the same amount of work. In short, perceptions of online courses are skewed due to a lack of information and training at all levels.

In collaboration with Geertruida (Margreet) de Rooij-Mohle of the Department of Germanic & Slavic Studies and the Centre for Extended Learning (CEL), this project centers around the research and design behind DUTCH 271: Culture and Society in the Netherlands. It is an English-language online course that will be offered by the University of Waterloo (UW). It is based on four key aspects of Dutch culture: Politics & Economy, Art & Literature, Religion & Tolerance, and Planning & Water Management. The focus of this project was the latter two units, as well as designing rubrics and evaluation tools in keeping with relevant educational theories. This is a unique project because of the mix of student, instructor, and designer input at all stages of the design process.

II. Methods
Neither of the project leads had a strong understanding of University of Waterloo policies and procedures for online course design. Addressing this involved being enrolled in the XCELR8 workshop, a four-day program spread over 2 weeks that is...
meant to prepare new online course designers. One tangible result of this workshop was the production of a prototype syllabus, including a full outline of course content and grade breakdown. It also set the precedent that the course would have strong critical thinking and research skill development components, in keeping with the department’s request that the course encourage the development of soft skills. From the perspective of a student, this type of higher level thinking is often not exercised or required in online courses because of the tendency towards oversimplification.

Further research into pedagogical practices was centered around the book “How Learning Works”1. This text provided several well-researched, practical approaches to teaching, including suggestions on how to implement them. Some of the key points that influenced the design of the template modules include: Providing direct feedback and opportunities to use said feedback, generating student motivation by allowing flexibility of research topics, creating frameworks to use and apply knowledge as it is gained, and stressing the importance of metacognition as part of the learning process. Numerous considerations from “Building the successful online course”2 were also implemented into the design of DUTCH 271. Notably, the benefits of online instruction listed in this text provide a number of reasons to host a course online. In particular, it allows for carefully curated content to be delivered, guaranteeing the quality of resources available to the students. It also provides many accommodations for students who can not learn or participate in a traditional classroom setting. CEL is exceptionally good at ensuring that all course material is available in a variety of formats for ease of access. It also describes an attitude for instructors that may be difficult to adjust to when coming from an in-person lecture background. The instructor of an online course is meant to be a guide to the subject material, not an exclusive source of knowledge for the students. Additionally, informal meetings were held with other members of the Department of Germanic & Slavic Studies, including Professors James Skidmore and Ann Marie Rasmussen. These meetings served to inform instructor best practices in similar culture courses that are already offered at UW.

Initial designs for the Religion & Tolerance unit revealed a need for a formalized, structured research and discussion section. Changes implemented included increasing the grade associated with student-guided research and discussion, dividing the week into two blocks of time (3 days for initial research and discussion post, 4 days for critique and response), and creation of a standardized rubric for the discussion-critique component of the course. In a typical week, students in DUTCH 271 will encounter the following breakdown of work:

- Explicitly stated learning outcomes
- A reflection question as a prompt before being exposed to course material
- A selection of readings from “Discovering the Dutch”3, the primary course textbook
- Additional reading or other media that discusses the topic in greater detail, or provides more information
- A discussion forum, where the class is split into small groups, further divided into Groups A & B. Groups alternate between researching and critiquing additional media.
- A quick, multiple choice comprehension quiz to ensure core concepts are understood

Beyond this sequence of tasks, at the end of every unit, students will write a journal-style entry on how their understanding of Dutch culture has evolved over the course of the unit. These activities are meant to encourage critical thinking and develop research skills among the students.

In early March, DUTCH 271 officially received departmental approval, with some provisions. There was a strong opinion that student research should be confined to a curated list of sources (akin to an “additional reading” list), and so focus shifted towards finding additional trustworthy sources to provide. The process of identifying potential sources, reading them, evaluating their usefulness for the course, and then securing the rights to use them has proven to be the single most time consuming aspect of this project. The initial goal to have all major course content delivered by mid-March had to be adjusted to accommodate this additional requirement.

III. Results

Next steps for the project include receiving Senate approval for the course to be added into the course calendar, finalizing the lessons and resources for the course, and designing the final reflection deliverable
for DUTCH 271 as a capstone-style project. Senate approval is expected to be received by the end of May. As it stands, the first 9 weeks of course content are ready. The aforementioned resource lists still require more work, as do the final 3 weeks of lessons. As a result, the ongoing goals for DUTCH 271 are to have the course running in Winter 2019, to continue to work with the Centre for Extended Learning to continually improve the content and presentation.

IV. Discussion

Current efforts by the University of Waterloo to develop and maintain online courses are done within the guidelines of the relevant academic literature. While many content designers choose to self-enroll in workshops like XCELR8, participation should be mandatory to attain a consistent level of quality. Furthermore, the XCELR8 program should be extended to include multiple modules. This would allow for more in-depth study of pedagogical best practices in an online environment. That being said, the Centre for Extended Learning is currently managing over 500 courses, and the resources required to implement this suggestion would be significant.

Many of the concepts that were learned and developed over the course of this project can be transferred into the development of curricula for workplace settings. However, some key assumptions can be made in the professional world that cannot be made in the academic world. On an organizational level, it is possible to standardize access to resources (computer hardware/software, media, etc.). Furthermore, a company can develop an online course that is far more tailored for the prospective “student” body because certain characteristics can be assumed in the workplace that cannot be assumed in academia.

V. References

Analyzing Whether Ontario Should Amend the Family Law Act to Incorporate Court-Ordered Parent Coordination.

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Abstract - In family law, there has been a shift away from traditional litigation as families are encouraged by judges, lawyers, and government to resolve conflict through alternative dispute resolution (ADR) processes (e.g., mediation). ADR processes have been identified as a means to minimize parental conflict allowing for greater empathy to the needs of children and providing for quicker and more satisfying outcomes for parents. Nevertheless, for some parents, conflict continues even after a parenting agreement has been reached. Parent coordination is an alternative dispute resolution service that assists high-conflict parents in implementing their co-parenting agreement with the best interests of the child as the focus. In 2013, British Columbia made amendments to their Family Law Act that allows judges to court order a Parent Coordinator, without their consent, to assist a family with living out their parenting agreement. Currently, Ontario has no provision or legislation regarding parent coordination and a Parent Coordinator can only be ordered upon consent of the parties. This thesis will report on the results of an in-depth literature review and six key informant interviews about whether Ontario should amend the Family Law Act to incorporate court-ordered parent coordination as informed by the British Columbia model.

I. Introduction

Parenting coordination is a child-focused hybrid intervention combining elements of mental health and law used as a post-decree intervention for parents who have failed at solving their disputes through mediation or other alternative dispute resolution. One goal is to help the parents disengage emotionally from each other and transcend the bitterness and anger that keeps them in litigation, while putting the focus on the children’s needs (Quigley and Cyr, 2017, pg 153). Parenting coordination has five main functions: (1) assessing the coparenting impasses; (2) education (e.g., on child development, impacts of conflict on children, communication techniques, etc.); (3) case management (i.e., referrals, communication with other professionals involved); (4) conflict management; and (5) decision-making (Deutsch, Coates, & Fieldstone, 2008).

Parent coordination exists across various jurisdictions with legislation and regulations varying. In British Columbia, a Parent Coordinator may serve either by the consent of both parties or by court-order, which allows a judge to order a Parent Coordinator to a family without their consent (Betrand and Boyd, 2017, pg. 23). British Columbia’s parent coordination practices will serve as a model to inform whether or not Ontario should adopt similar practices.

Currently in Ontario, there is no existing legislation surrounding parent coordination. Parent coordination services must be voluntarily consented and entered into by both parties as these services cannot be court-ordered by a judge (Betrand and Boyd, 2017, pg. 20). This thesis will analyze the benefits and implications of court-ordered parent coordination in British Columbia through the literature and supplemented by key informant interviews with professionals that have extensive knowledge of parent coordination. Ultimately, this information will be analyzed and synthesized and, recommendations will be made advising Ontario as to whether the Family Law Act should incorporate court-ordered parent coordination.
II. Methods

To gain a deeper understanding of parent coordination practices in British Columbia and Ontario, both a literature review and semi-structured interviews were conducted. Prior to the interviews, the literature review facilitated a background understanding of the origin of parent coordination, parent coordination best practices and implications, and certain populations most affected by parent coordination. The literature informed the researcher of key topics, themes and concepts to incorporate within interview guides to facilitate an insightful discussion with key informant family law professionals. Through the literature reviewed, comprehensive information concerning parent coordination across jurisdictions was compiled in order to carefully consider the benefits, implications and outcomes of parent coordination services.

In order to supplement the literature reviewed, six semi-structured interviews with family law professionals from British Columbia and Ontario were conducted. The purpose of the interviews was to gather a variety of professional opinions in order to provide perspective as to whether Ontario should incorporate court-ordered parent coordination in legislation. This study used a purposeful sampling method in order to gain a variety of opinions from professionals that had experience with court-ordered parent coordination in British Columbia and professionals that were experienced with Ontario’s parent coordination process. Before conducting interviews, this study had been reviewed and received ethical clearance through the University of Waterloo Research Ethics Committee. After receiving ethical clearance, six family law professionals were recruited including academics, lawyers, social workers, mental health professionals, and parent coordinators from British Columbia and Ontario to participate in a 20-30 minute semi-structured interview. These participants were recruited through email and the interviews were conducted over the phone while being recorded with a recording device.

Two interview guides were designed varying by province and informed by themes emerging in the literature regarding parent coordination practices in both Ontario and British Columbia. Both interview guides had five questions pertaining to parent coordination practices in the respective province in order to guide the discussion between the researcher and the key informant. The interviews were transcribed and analyzed using a thematic analysis approach in order to capture similar and differing themes and concepts between interviews. These themes and concepts included opinions on court-ordered parent coordination, best interests of the child, appropriate referrals to parent coordination, parent coordination credentials and costs of parent coordination services.

Quotes involving themes of interest from key informant interview transcripts were extracted in order to supplement the literature review and support the discussion and conclusion portion of the thesis. Quotes from the key informants were chosen based on themes and concepts identified and were stripped of identifying personal information before being included throughout the thesis. However, all participants consented to associating their quotes with their occupation and province, which will be included the final paper.

III. Results

The literature reviewed and key informant interviews generated substantial evidence to indicate that Ontario should consider amending the Family Law Act to incorporate court-ordered parent coordination following British Columbia’s model. However, there are conditions that Ontario should consider undertaking before amending legislation, which are as follows.

Currently, Ontario has no mandatory requirements or regulations to practice as a parent coordinator since there is no legislation regulating parenting coordination services (Betrand and Boyd, 2017, pg. 20). However, if Ontario were to adopt court-ordered parent coordination in legislation then a mandatory and standardized parent coordination accreditation program should also be implemented following British Columbia’s Parenting Coordination Roster Society as a model.

Furthermore, multiple key informants who practiced as Parent Coordinators mentioned the issue of inappropriate referrals to parent coordination services. Since parent coordination is a fairly new form of alternative dispute resolution, there is a lack of knowledge and education among family law professionals of the role of parent coordinators. This means that often times, families that are referred to parent coordination may not benefit from the service and instead, using this service could create more conflict. Implementing
court-ordered parent coordination means that it would be imperative for all family law professionals become educated on the nature and scope of a Parent Coordinator’s role through consistent, standardized training. Educational training for family law professionals would reduce the amount of inappropriate referrals or court-orders.

Finally, all key informants noted that there is no public funding for parent coordination in British Columbia, which is problematic for low-income families accessing services. Implementing court-ordered parent coordination in legislation means that Ontario must consider affordability of services and generate options for low-income families such as publicly funded subsidization or tax benefits.

IV. Discussion

After analysis of the literature on parent coordination supplemented with interviews from key informants with expertise in family law, Ontario should consider implementing court-ordered parent coordination in the Family Law Act. It is recommended that Ontario creates a mandatory accreditation program similar to British Columbia’s Parenting Coordinator Roster, offers subsidized options for low-income families, and implements a mandatory education program for all family law professionals that refer clients to parent coordination services.

There is a lack of literature surrounding parent coordination services and the outcomes that parents experience. Conducting a longitudinal research study on the outcomes of court-ordered parent coordination as opposed to parent coordination by consent would be beneficial in filling the existing gap in literature. Analyzing the outcomes of court-ordered parent coordination in relation to parent coordination by consent would also facilitate a better understanding of the benefits and implications of court-ordered parent coordination.

Ultimately, the research conducted in this thesis provides evidence that Ontario should amend legislation to incorporate court-ordered parent coordination so judges have the jurisdiction to provide families with the assistance they need post separation and divorce.

V. References

INTEG 320 Group Formation Practices: Recommendations for Fall 2018

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Abstract - As part of their studies in the Bachelor of Knowledge Integration program at the University of Waterloo, students must enroll in the four-part Museum Course where they apply their previous education and experience to a major collaborative interdisciplinary project. In parts three and four of the Museum Course groups are formed and students must complete the eight-month phase of their project together. While groups generally perform well, some students may experience interpersonal challenges if they have poor group dynamics for some or the duration of the project. In order to lessen the chance of students having a negative group experience, this research study develops a list of recommendations to improve future course offerings. In order to do that, this study first reviews current best practices of group formation for long-term undergraduate groups projects to assess if the course is aligned with these practices. Second, this study uses qualitative data from interviews with past Knowledge Integration students who have recently completed the Museum Course to understand their unique challenges. The recommendations made by this study will be tailored not only to long-term undergraduate groups projects, but specifically to this unique four-part course.

I. Introduction

Groups project that require students to collaborate are frequently used in undergraduate courses, but without careful planning they can quickly frustrate students more than reward and challenge them (University of Waterloo, 2017). In the Bachelor of Knowledge Integration program at the University of Waterloo, students must enroll in the four-part Museum Course where they apply their previous education to a major collaborative interdisciplinary project. In parts three and four of the Museum Course groups are formed and students must complete the eight-month phase of their project together. Specifically, groups are formed in part three of the course, which has the course code INTEG 320 and will be referred to as such for the rest of the paper. While groups generally perform well, some students may experience interpersonal challenges if they have poor group dynamics for some or the duration of the project. These interpersonal challenges could lead to feelings of anger, stress, and frustration and contribute to students having a negative group experience. In order to lessen the chance of students having a negative group experience, this research study develops a list of recommendations to improve future course offerings through changes to the way the course facilitates group formation, as it is a multi-step process that has varied in the past. In order to do that, this study first reviews current best practices of group formation for long-term undergraduate groups projects to assess if the course is aligned with these practices. Second, this study uses qualitative data from interviews with past Knowledge Integration students who have recently completed the Museum Course to understand their unique challenges. The recommendations made by this study will be tailored not only to long-term undergraduate groups projects, but specifically to this unique four-part course. Furthermore, the recommendations will be shared with the course instructor, Dr. Rob Gorbet, so he has the opportunity to implement them when the course runs again in Fall 2018.
II. Methods

For this study, interviews were conducted as they allowed the researcher to directly engage participants through a conversational format to gain a thorough understanding of student’s experiences in the Museum Course. This section will discuss the interview design, interview sample population, participant recruitment procedures, and analysis of interview transcriptions.

Prior to the interviews, a literature review was conducted to answer the first research question: Do group formation practices in INTEG 320 adhere to best practices in multi- or inter-disciplinary collaborations at the undergraduate level? Afterwards, interviews were conducted with current KI students and recent KI graduates to answer the second research question: How might we improve on current practices in INTEG 320 to improve course design, delivery, and student experience? Interviews were semi-structured and lasted about 20 to 30 minutes. The goal of the interviews was to collect experience reports from past students during the group formation process in INTEG 320 and during their eight-month group project. Additional interview questions sought participant views on how best practices identified in the literature might be implemented into the course.

The interview population included: two students from KIX 2015, three students from KIX 2016, and three students from KIX 2017, students in KI, two with non-KI students in their group, three with poor group experiences, and three with very strong group experiences. Participants were recruited from KIX 2015, KIX 2016, and KIX 2017 because they are the three most recent cohorts who have completed the museum project, therefore, it was assumed that they would have the most accurate memory of their experiences.

This study used a purposeful sampling method, attempting to collect typical cases that would be representative of student experiences’ in the course. Participants were recruited through two modes of outreach: first, emails were sent from the course instructor, Dr. Rob Gorbet, and then messages from the researcher’s personal Facebook. Through emails from the course instructor four participants were successfully recruited, and through messages from the researcher’s personal Facebook four participants were successfully recruited, for a total of eight participants.

The interview was designed by the researcher based on themes identified from personal knowledge obtained through taking the course and best practices identified in the literature. The interview consisted of 11 questions for KIX 2015 and KIX 2017 students and 10 questions for KIX 2016 students, broken into four sections on group formation, group experience, implementing best practices, and a conclusion section that allowed participants to share any information they felt the research questions did not cover during the interview. The slight variation in interview questions was due to questions about group formation as KIX 2016 formed groups in a different way than KIX 2015 and KIX 2017. The majority of the questions were the exact same. The interviews took place between December 15th, 2017 and February 16th, 2018.

After the interviews were complete, they were transcribed and reviewed by the researcher to
identify general trends and themes that help answer the second research question: How might we improve on current practices in INTEG 320 to improve course design, delivery, and student experience?

III. Results

The data presented in this section comes from the trends and themes identified during the interview analysis phase. This section will discuss the findings on group formation by topic, group formation by personality, and group formation by heterogeneous skills, as well as additional findings related to problems groups experienced around expectations or level of commitment to the project and the lack of concern for considering schedule availability when forming groups. Quotes will be left out in order to ensure the confidentiality of all participants.

When talking with participants from KIX 2016, the year that formed groups around a topic, all three participants indicated that they were still not completely happy with their topic or that the topic was still a point of conflict in their group because the broad topic still needed to be significantly narrowed down.

When talking with all participants, many talked about forming groups around personality. Overall, participants indicated that they cared a lot about the personalities of people in their group and whether or not they thought they would be able to work well with them in the context of a group project. Furthermore, responses to a question about times individuals chased over something and how to predict and avoid that in the group formation phase indicated that many groups experienced conflict due to clashes between either quiet and more dominant personalities or between dominant personalities.

Next, when talking with all participants, many also talked about forming groups around heterogeneous skills. For the purpose of this study, skill refers to the hard or soft skills that someone could potentially bring to their design group as suggested on the who-am-I form. The examples of potential skills listed on the who-am-I form include: writing, research, building, planning, project management, and graphic design. Overall, participants indicated that the skills each student brought to the group was less important than how they played out. Furthermore, participants also indicated that even when their group lacked a necessary skill, one or more members were able to learn it to an appropriate level to satisfy the need for that skill.

Additional findings also indicated that most groups, whether they had an overall positive, neutral, or negative group experience, experienced significant problems around expectations or lack of commitment to the project. And finally, it is worth noting that all participants, through either explicitly stating or a question that involved ranking, indicated that schedule availability was not a concern to them when it came to forming groups.

IV. Discussion

The recommendations presented in this section come from the results from the interview analysis phase and from considerations made by the researcher. The recommendations are not entirely complete as research is still being conducted on how to best address some of these results according to the literature, but the current recommendations are as follows:

First, as discussed in the results section, even when groups were formed around a topic participants were not completely happy with their topic or that the topic was still a point of conflict in their group because the broad topic still needed to be significantly narrowed down. Therefore, in the interest of lessening the chance of students having a negative group experience as a result of poor group dynamics, the first recommendation is to not form groups around a topic as was done during INTEG 320 for KIX 2016.

Next, as discussed in the results section, students did not think schedule availability was a concern. Therefore the final recommendation is to not consider schedule availability when making groups. This recommendation is also supported by the fact that after the first four months of the project, when it becomes a new semester, this consideration is no longer relevant. The added benefit of this recommendation is this is one less step to consider during the group formation process.

V. References

The (im)mobilized city: The right to the city and Toronto's struggle with modernity and identity

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Abstract – This paper is an exploration of how cities conform to David Harvey's idea of the right to the city: the agency to practice everyday life in urban space, thereby creating it. Here, this concept is instead approached from its opposite: the ways in which urban space shapes or controls people. A city in which individuals are controlled is immobilized—unable to move across the social and economic spectrum, unable to communicate, and unable to physically move: constricted and congested. Toronto serves as the case study for exploring these themes through the examination of three aspects: roads, houses, and the newly proposed waterfront development by Google subsidiary, Sidewalk Labs. Important to the findings are that Toronto's identity is obsessed with being modern, a paradox in which the act of becoming modern requires forgetting—an amnesia. Without memory, its inhabitants are unable to practice the everyday life that was tied to it. The modern city, to invent itself, must dictate how people are to live there. Modernity is driven by global economic forces that commodify history and identity, an aesthetic. These aesthetic allusions to a pre-modern identity do not inherently create the associated way of life, as diverse functions do not inherently create a social mix. This research implies that identity cannot be induced and that developments such as Sidewalk Labs may serve to reduce agency in urban space.

I. Introduction

This paper begins with David Harvey's concept of the right to the city and the understanding that while people give shape to cities, cities in turn give shape to people¹. This frames the right to the city as the ability to shape ones self through the process of shaping urban space. Here, I take this to be as an expression of everyday life: the practice of living that is particular to an individual, group, or place. This agency, which Harvey describes as a collective right, by itself is difficult to see, therefore, a clearer exploration of it can be undertaken through its absence—the control and regulation of people. In other words, the right to the city can be expressed as mobility: social, economic, ideological, and physical, and where people are immobilized is where they lack the right to the city.

Toronto serves as a case study and presents three aspects of interest: roads, houses, and the connected city, embodied by the proposed development by Google at Quayside on Toronto's Waterfront. Each of these aspects provides a platform from which to discuss the thoughts of one or several thinkers on urban space. Additionally, an attempt has been made to understand Toronto's history, cultural perception, and literary imagining, giving ground to the ideas of the thinkers.

From these three angles, several threads emerged. The idea of modernness appears as central in Toronto's identity. A distinction must be made, however, between modern and modernism—modern is the newest fashion, new buildings of today can be modern, and modernism is the name of the aesthetic movement from the early and mid 1900s. According to Harvey, modernism is concerned with eternal and universal truths, yet it
is ephemeral\textsuperscript{2}. This concern, which applies to both forms of modern, does not respect its own past, creating a paradox of identity: the act of becoming is the same as forgetting. This modern amnesia produces a space of separation: separating the past from the present, one function from another, and people from each other. The segregation of modern space is like the tool of discipline described by Foucault, and it allows the associated lifestyle to be enforced\textsuperscript{3}. Richard Sennet describes how the perception and use of public space has changed. Historically it was a space to interact freely with the public, but increasingly is a space within which each individual has the right to be undisturbed\textsuperscript{4}. Privately controlled space disguised as public space is becoming more common, implying severe consequences for the public realm and public agency.

II. Roads

The conflict explored around roads concerns their use and purpose. Henri Lefebvre describes this balance in his spatial triad\textsuperscript{5}. The important distinction he makes is between spatial practice, the way people use space, and representations of space, the administrative and official conception of the space. Officially, roads are highly regulated to accommodate cars and transportation, yet roads are flexible public spaces where people can celebrate, play games, and enjoy their time. However, the highly controlled and nearly identical roadways given over entirely to cars are what Marc Augé calls non-places\textsuperscript{6}. Non-places are much same no matter where they are, regardless of who uses them.

In Toronto, roads of Toronto serve to connect and to divide. From the 40s to the 60s, a planned network of highways ran around and through Toronto that would fuel suburban growth at the expense of urban space. The highways would create a physical division, dividing neighbourhoods and communities, and enabling the geographic isolation of suburban communities from their urban counterparts. Ultimately cancelled from local resistance, these unfinished inner-city highways represent Toronto’s conservatism and reluctance to accept modern urban values.

III. Houses

Modern housing in Toronto revolves around four interlinked tensions. 1. The paradox of a modern identity is one in which the act of creating identity is the same as forgetting it—amnesia. 2. This is reinforced by the shifting moral imperatives that accompany each successive form of modern housing. 3. These moral imperatives exert different forms of control and regulation in order to invent the modern identity. 4. The three former tensions are played out between urban and suburban space, a conflicting idea of what is central and what is peripheral.

Regent Park in Toronto is an excellent example of the urban tensions\textsuperscript{7}. Originally a lower income neighbourhood called Cabbagetown, social activists and planners, in the 40s, called for its demolition (slum-clearance) and renewal in the style of Le Corbusier's towers in the park to reduce crime and make it clean. The tenants regulated by the state in Regent Park, who had formerly been homeowners, now lived in bland cruciform apartment blocks and the crime and poverty it promised to eradicate quickly returned. Again, in 2002, the state landlord began a process of revitalization that, like the process that replaced Cabbagetown with Regent Park, will ultimately destroy and replace the entire development. The planned income and tenure mix in the revitalized regent park are intended moderate, regulate, and reform the impoverished subsidized tenants\textsuperscript{8}, and the legal bureaucratic forms of shared condominium ownership demand conformity from owners\textsuperscript{9}.

IV. The Connected City

Technology will enable a new style of modern city, a synthesis of the rational and separated post-war city and the aesthetically mixed style of new urbanism: what I have called the connected city. It is connected in three ways: to the rational data of the internet, to the global economy, and to culture and identity. Sidewalk Labs' proposal for Quayside fits this description\textsuperscript{10}. Their conception of urban space is an extension of digital space, in which everything is monitored and available online, and in which the civic functions of urban space are supplanted by smart phone apps. Like digital space, the fundamental
physical architecture is modular, and replicable, able to emulate the copy/paste/delete functions of data. This modularity enables the innovations from here to be exported to cities globally, and this is explicit in the proposal.

This infinitely mixed and variable development serves to further segregate and separate people, though at first glance it appears the opposite. The reason for this is that this urban space is under perfect surveillance—everything about everyone is known at all times—and the intention is that daily interactions are mediated through the internet. Even though a neighbourhood may be mixed in every way, the available information and mediation makes it possible to pinpoint a socioeconomic class, a cultural group, or profession. They are physically mixed, but this is imagined as digital space, where proximity has little value.

V. Conclusion

The built form of a place is important because it physically ties a space to the past that produced it. Yet place is created by the people who animate space with their daily life: a place can be preserved even with a new built form, but it cannot continue without daily life and its history. When the patterns of daily life are enforced and regulated, it reduces the agency to create place.

The right to the city is the right to create place. In Toronto, that right manifests in spite of its pride in being a modern global city. Global planning and market trends govern the creation of urban space and these spaces allow only a certain way of life, effectively controlling inhabitants. The forms of modern developments in Toronto since the 40s have subjected citizens to these forces and commodified the spaces they have produced.

VI. References

Designing and developing *mkd3*, software for learning about academic literature

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Metadata about academic literature can be very useful for researchers, particularly when first searching for literature in a given field. It becomes more useful when presented in an easy to understand format. Software exists to help researchers interpret this data, some of which are graphical user interfaces (GUIs) which can be easier for users who don’t have a technical background. McLevey, McIlroy-Young, and Anderson have developed a Python library, *metaknowledge*, which allows for bibliometric and network analysis of academic literature¹². This can be very useful to researchers who have an understanding of computer programming, but can be difficult for those lacking that expertise. *mkd3* is a web app built with Python that uses the capabilities of *metaknowledge* to analyze metadata in the background, while being accessible to users via a GUI. Users can provide metadata obtained from the results of a search in an academic database or citation index, and *mkd3* will produce a report containing interactive graphs made with JavaScript library *D3*³. *mkd3* aims to communicate summaries of the metadata in an easily interpretable way.

I. Introduction

Metadata about academic literature, such as names of contributors, publication year, cited references, and citation count, can be highly useful to researchers, particularly when first searching for literature in a given field. The ability to view this information in an easy to consume manner makes it more useful still. Many technological solutions exist to help researchers work with this data, some of which are graphical user interfaces (GUIs) which can be easier for users who don’t have a technical background. McLevey, McIlroy-Young, and Anderson have developed a Python library, *metaknowledge*, which allows for bibliometric and network analysis of academic literature¹². This can be very useful to researchers who have an understanding of computer programming, but can be difficult for those lacking that expertise. *mkd3* is a web app built with Python that uses the capabilities of *metaknowledge* to analyze metadata in the background, while being accessible to users via a GUI. Users can provide metadata obtained from the results of a search in an academic database or citation index, and *mkd3* will produce a report containing interactive graphs made with JavaScript library *D3*³. *mkd3* aims to communicate summaries of the metadata in an easily interpretable way.

II. Process

I have aimed to create this software in an iterative, design-centric way. I began by learning about data visualization practices⁴. I learned about the literature review process⁵⁶ and student research habits⁷⁸⁹¹⁰¹¹¹²¹³ to better understand the users. I used online tutorials to learn technical skills and how to work with necessary packages.

I brainstormed how users could interact with *mkd3* and how the information could be presented. I sketched these ideas on paper, and then created low fidelity wireframes using *Balsamiq*¹⁴. I created a high fidelity prototype using *InVision*¹⁵, and then created an HTML and CSS prototype.

I created three personas based on secondary research, to help keep my users in mind throughout the process. One represents an undergraduate student with significant technical skills, one a graduate student with minimal technical skills, and one a librarian.

I then began developing, writing Python scripts to analyze the data and produce JSON (JavaScript Object Notation – a human-readable format for...
communicating data between different programming languages \(^{16}\) objects, and \(D3\) functions that display the data as graphs. I learned how to use \(Django\), a Python web framework \(^{17}\), to allow Python to be used in this web app.

When \(mkd3\) reached a minimally viable stage, I sought feedback from users, including an undergraduate and graduate student, a professor, and a librarian. After each session, I made improvements based on the feedback. I found that undergraduate students are likely to have different goals than graduate students and professors when using \(mkd3\). I continued developing \(mkd3\) after user testing.

### III. Functionality

\(mkd3\) is built with \(Django\), an open source web framework \(^{17}\), to allow the Python scripts and JavaScript functions to interact. \(mkd3\) runs in a browser, and the look and feel is comparable to most modern websites. From the homepage, users can choose “create report” to generate a report based on their provided metadata, or “show me how” to read tutorials about how to use \(mkd3\), how to obtain metadata files, and how to understand a report. Metadata files can be obtained from the results page of a search on Web of Science, Scopus, or PubMed.

When the user selects “create report”, Python scripts run in which \(metaknowledge\) reads in all the metadata files in the given directory. A list is created of Python dictionaries which I’ve called “paper objects”, where there is one dictionary per paper each with a key and value pair for every piece of metadata that will be needed in subsequent scripts (ie. “year”: 2018). These paper objects are organized differently for each graph that will be generated, and this is saved as one JSON object. Subsequently, JavaScript reads the JSON object into the HTML file for the first report page. \(D3\) is used to generate the following interactive graphs:

- A horizontal bar graph showing up to the top 40 journals by how many of the papers it’s published.
- A horizontal bar graph showing up to the top 40 subject areas by how many of the papers are from that subject (Figure 2).

Most graphs are horizontal to maximize readability of axis values, while the year graph is vertical because this is a more recognizable way to view timelines.

Hovering over any bar displays the category (ie. “Year: 2018”) and the number of papers (or citations) for that category. Clicking on any bar opens a new tab displaying a list of the papers and their abstracts from that bar’s category. These are displayed in MLA by default, but users can switch between formats. For papers with an associated DOI number in the metadata, a link to the paper’s online location is provided.

From each report page, users can navigate to the other two report pages, or back to create a new report. The second page contains \(D3\) graphs based on natural language processing (NLP), which is done using Python library \(spaCy\) \(^{18}\). The data is produced by Python similarly to that described.
above. These graphs include:

- A horizontal bar graph showing the words that occur in the most papers’ titles, abstracts, and author keywords.
- A list of papers that are likely to be review articles, based on the presence of the word “review” in the title, abstract, or journal.

The third report page contains network visualizations, made from data created with `metaknowledge` and `networkx`. This generates edge lists which are stored in a JSON object along with information about each node. These networks include:

- A co-authorship network where each node represents an author and each edge represents a paper that both the connected authors contributed to.
- A co-citation network where each node represents a cited paper and each edge represents a paper that cited both of the connected papers.
- A bibliographic coupling network where each node represents a citing paper and each edge represents a paper that has been cited by both of the connected papers.
- A co-occurrence network where each node represents a word and each edge represents papers that use both the connected words in their titles, abstracts, or author keywords.

IV. Next Steps

I plan to add additional functionality and improvements to `mkd3`, as well as changing how it can be accessed. `mkd3` is currently a working web app that can run on a local server, but the necessary Python packages must be installed on the user’s machine to run it. I plan to make `mkd3` accessible on the internet, allowing users to access `mkd3` like any other website, and upload their metadata files to a server in a familiar way.

However, given the additional cost of handing potentially moderate website traffic, and the security needed to handle file uploads, it is likely that as an intermediate step, `mkd3` will become available for download. This will allow users to download all the necessary files to run `mkd3` on their own machine. Instructions will be provided for how to download the necessary Python packages, and for how to run a local server to use `mkd3`. This is not the ideal solution because additional required packages must be installed, the user experience is not as smooth, and there is some work involved to access `mkd3` the first time. However, it will make `mkd3` accessible to some users before it is released as a fully functioning website. The end goal is for `mkd3` to be accessible online, where it will allow researchers to learn more about their literature in a helpful and easy to understand manner.

V. References

5. Gough, David; Oliver, Sandy; Thomas, James (2012). An Introduction to Systematic Reviews. SAGE.
The benefits to musical training for the resilience of neuro-degeneration leading to Parkinson’s disease and dementia: a systematic review

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Abstract - With research on music treatments for various physical and psychological disorders on the rise, studies are exploring new ways to reverse adverse conditions. This systematic review analyses 25 articles on music training affecting brain structure, music training improving functional behaviour, music therapies to reduce the symptoms of Parkinson’s disease, and music therapies to reduce the symptoms in dementia. Grey and white matter changes to musicians’ brain structures were found in cerebellar, motor, and auditory regions in the brain as a result of their long-term skill training. Musical therapies such as Rhythmic Auditory Stimulation (RAS) and vibroacoustic therapy were found to relieve symptoms and improve motor function in patients with Parkinson’s disease. Music therapy for adults with dementia improves sensory, social, and physical functioning, while triggering memory recollection. With the data collected through offline resources and through the chosen databases, a positive correlation between music training and cognitive resilience was found. More research in this area is needed to produce evidence-based results and to consider multiple factors in affect for healthy brain aging.

I. Introduction

The Aging Brain

With the rise of the aging population comes the rise in the prevalence of illnesses common in old age. Dementia and Parkinson’s disease (PD) are currently the most prevalent in Canada. In PD there is the deterioration of components of the somatmotor and emotional motor systems, ultimately resulting in the loss of control over motor processes and functions (Braak, et al., 2003). Dementia refers to the group of chronic cognitive impairments usually affecting memory, with Alzheimer’s disease accounting for roughly 80% of all cases in the United States (Lopez et al., 2011).

Researchers have been looking for ways to both treat and prevent these diseases with little success. Treatments range from lifestyle changes to pharmaceutical interventions. Over the years scientists began to make a connection between cognitive functions and musical stimuli, joining the two worlds of neuroscience and musicology.

The Power of Music

Music is a phenomenon that presents a wide array of benefits. One study discovered differences in the sizes of the gray matter of certain parts of the brain between professional musicians, amateur musicians, and non-musicians (Gaser & Shlaug, 2003). Some of these areas include structures involved with touch, muscular activity, audio processing, and language comprehension. This is only one of the many studies focusing on the effect of musicianship, and this review provides a synthesis of the available research.

II. Methods

The search for relevant studies was conducted primarily through 3 databases: University of Waterloo PRIMO, JSTOR, and ProQuest. The search terms used include music training, music playing, brain structure, dementia, and Parkinson's. I searched the references of the Music, Health, and Wellbeing textbook (MacDonald, Kreutz, & Mitchell, 2012) in one
chapter that was relevant to my research question. References of the articles were screened.

Some of the inclusion and exclusion criteria for studies were that they be in English, accessible online to UW students, conducted in Canada or the US, and that they contain analyses of brain structures or analyses of behaviours after musical interventions. The Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Case Control Studies (Moola et al., 2017) was used to identify studies that met the methodological quality standards for this review. Data were extracted using a table created in a Microsoft Excel sheet. It included the appropriate PICO (Population, Intervention, Comparison, Outcome) values with detailed findings.

III. Results

Characteristics of Studies

The total number of articles originally found through the search results was 647. There were 406 articles identified as irrelevant by their titles and if necessary by their abstracts, and the rest were further screened for inclusion criteria. There were 26 studies identified but 1 study was excluded due to its limited matching of cases and controls. In the end, 25 articles were fully reviewed and included for synthesis. All of them were case control trials, and among those 19 explored brain structure and music, 5 studied PD in relation to music, and 1 dealt with dementia and music.

Many of the studies compared musicians as the experimental group to a control group of non-musicians. Studies gathered defined musicians as those who were “performing artists, full-time music teachers, or full-time conservatory students having an average daily practice time of at least 1 hour” (Gaser & Schlaug, 2003), or were classically trained instrumentalists (Hutchinson et al., 2003; Zuk, Benjamin, Kenyon, & Gaab, 2014). All definitions of non-musicians were individuals who have never had musical training, including formal singing training.

Imaging Technologies

Multiple studies included image scanning technology to assess the brain anatomically. Magnetic resonance imaging (MRI) and functional magnetic resonance imaging (fMRI) were used most frequently, followed by voxel-based morphometry (VBM).

Music in Action

Eleven studies investigated the effects music had on functions and actions without the use of brain imaging scans. They measured cognitive flexibility, working memory, verbal fluency, processing speed, fine motor skills, verbal ability, non-verbal reasoning, and mental state, while special measures for PD include freezing of gait, interresponse-intervals, and interstimulus intervals. They were measured before and after musical intervention or measured between an experimental music group and a control group.

Rhythm as an Intervention

Rhythmic auditory stimulation (RAS) improves stride length in patients with PD (Hausdorff et al., 2007). It furthermore improves gait in terms of step frequency and velocity (Thaut et al., 1996; McIntosh et al., 1997), while additionally other rhythm-induced therapies and training were shown to improve gait in PD patients and improve or activate motor functioning.

Memory and Music

Four studies analyzed memory in subjects after musical interventions or while performing tasks.
They all found that musicians performed significantly better than non-musicians on memory tasks, while one found that the hippocampal grey matter did not increase in the subjects who underwent musical training (West et al., 2017).

IV. Discussion

Characteristics of Studies

The numbers of articles included for PD and dementia were significantly lower than that of the brain structure group. The reason for the low result of PD studies was majority were conducted outside Canada and the United States and therefore did not meet the inclusion criteria. The low number of dementia studies was a result of foreign studies, and many involved dancing and listening exercises which lack enough relevance for this research question.

Music in Action

The behavioural analyses performed by 11 of the studies had findings consistent with the findings for brain structural matter: musicianship is positively correlated with skillset and neural development. The musicians outperformed non-musicians in majority of the tests, otherwise they performed equally.

Rhythm as an Intervention

Musicians performing a tapping movement task had activations in the primary motor cortex and the supplementary motor area in the neocortex, the basal ganglia, and cerebellum (Thaut et al., 2008). These are areas of the brain related to muscular activity and movement and reveal that as music affects these areas, it effects improvements in motor functioning in PD patients, who have consistently shown improvements after rhythm-induced therapies.

Memory and Music

The single dementia study in this review (Tomaino, 1998) utilized listening music therapy, and although that does not relate to the research question, the study revealed other valuable information. Dr. Tomaino has worked with musicians who have dementia, indicating that musicians can indeed fall prey to neurodegeneration. However, it is unclear whether the onset of dementia was delayed in these individuals.

Future Implications

Music has been found to improve functional behaviours, including academic achievement, which can encourage education systems to restore and encourage music programs in school. Changes are not limited to children, as all the studies of adults show an improvement for them as well. This is an encouragement for adults to engage in music playing without fear of futility or poor results.

Only four studies performed randomized control trials (RCTs). With the lack of RCTs included in this review it is impossible to interpret the results of these studies as causal and not correlational. To accurately answer this question more RCTs must be performed within longitudinal studies to fully observe the experimental and control groups from the commencement of musical training.

V. References