Establishing a Project Center in Montreal, Canada

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by
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2. Abstract

WPI's global programs have grown exponentially in the past few years. This growth has happened in an administrative void, lacking a clear pathway for members of the community to assist in establishing new project centers where the program is currently lacking. By investigating the process to establish new project centers, I determined that the process lacks structure and clarity. However, based upon what I found, Montreal is extremely suitable and would be a great testing ground to improve all global projects.

3. Executive Summary

This project set out to establish a project center in Montreal. Although ambitious for a one-person project team, the importance of establishing a relationship with one of our neighbors could be passed by. Researching the expansive cultural interchange that has occurred in Montreal, further solidified the need to establish a WPI presence in this location. Where else will students be able to experience a fully bilingual city, with as rich of a history as Montreal. Every detail I picked up while working through this project could be expanded into an IQP of its own.

Once the potential for the project center was established, I began investigating the administrative backend required to create the project center. Here I was met with many roadblocks of both uncertainty and vagueness. The main takeaways were there was not a process that could be followed, and that many of the decisions were made solely by WPI administration. Furthermore, after discussing the idea with various Faculty, Staff, and Students, I found there were many more challenges that must not be ignored in a new project center.

This led my project along a meandering path, trying to document everyone's thoughts and opinions. While it has resulted in a project that has few definitive results, it hopefully proposes a few ideas for future projects to develop further. While establishing a project center is plenty of work on its own, it would be irresponsible to not attempt to make the process clearer and attempt to solve some existing problems at the new project center. It is much easier to trial solutions in a new environment than one in which sponsors already hold certain expectations.

There is great potential for a thriving relationship that is beneficial for both WPI and ETS students. I hope this opportunity does not pass WPI by.

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5. Introduction

The original objective of this project was to establish a project center in Montreal. This would establish an international project center accessible without an airplane. The fact that this did not already exist seemed surprising, as there has recently been a large push to encourage students to go abroad for diverse cultural experiences. Therefore, it seems obvious that we would have a project center in Montreal, a cultural melting pot that is easily accessible for students.

As the project evolved, it became apparent that the processes for establishing a new project center were not well defined, let alone publicized. As such, the main objective pivoted to create this documentation that was sorely lacking. The scope of this project continued to expand as more research was conducted due to both large student concerns, as well as conflicting information.

As such, the majority of the project was formed around 2 main objectives:
- Document the process to create a project site
- Determine the viability of Montreal, QC as a new project site

The other remaining objectives were not as related to the initial goal and were developed as I spoke with more students and faculty about the IQP experience. Before the COVID-19 pandemic, IQP experiences were generally positive. As such, there was rarely in-depth discussion about the experience, especially in a comparative manner to other students. The pandemic forced many IQPs to be completed remotely or moved on campus. This led to many discussions among students from different project sites, which brought to the forefront the disparity in IQP experiences. Upon discussing ID2050 with both recent graduates and current students, further disparities were identified.

The other added objective was to identify the cause of the lack of knowledge about abroad MQP and HUA projects and to determine whether a new, closer, project site would address the issue. Upon speaking with the global school, it seems that while these are global programs, they remain decentralized and within their respective departments. This has led to a lack of clarity and publicity for these programs.

5.1 State-of-the-Art

There have been numerous past IQPs that set out to create a new project center, however, their approach was not possible for this project. Most of the previous projects simply traveled abroad and completed a term in the proposed destination, tracking expenses and attempting to complete a sample IQP. This was possible due to support from the Global School (or equivalent office) as a sponsor and having a large project team. These projects were largely successful, however did not document the administrative work required before their project was established.

This project uses the past projects as a reference; however, it was not given nearly the same support as the other projects. The support given was in the form of a few conversations with different faculty and staff of the global school, as well as professors who regularly operate project centers. While helpful, this led to many uncertainties as the process for establishing a new project center is undefined.

This project hoped to better define and clarify the process, especially for a member of the community to suggest potential project site locations. To achieve these goals most of the work consisted of speaking with various WPI employees, as well as a short visit to Montreal. These conversations led to a variety of discoveries that when compiled make it quite difficult to layout the process for establishing a project center. I hope the suggestions for improvement based upon this information, combined with student opinions will hopefully improve project experiences in all project centers.

6. Methods

As previously stated, the process to create a project center is not clear. As such, the methods for this project took a meandering route, resulting in new objectives and plenty of opportunities for future work. The main objective remained to determine and document the process to create a project center, specifically in Montreal, as well as generalize for any location. This included confirming the viability of Montreal as a project site. Creating a more uniform project experience, as well as increasing awareness of HUA and MQP opportunities abroad were added as objectives later, although none of the objectives were fully realized.

6.1 Objective 1: Documenting how a project center is created

To effectively document how project centers are created, I first had to determine how the process has worked in the past. I followed the following process to determine this information:
1. Reach out to Faculty and Staff who have seen or been involved in the process before
2. Reach out to current project center directors
3. Reach out to the administration, specifically the global school

I figured that the first two resources would give me a good starting point to understand, from an outside perspective, how the process worked. It is also important to remember that since these are outside perspectives, they do not deal with the process on a day-to-day basis. The information gained from speaking with them was simply to add some context to my viewpoint before speaking with the administration about the process.

After reaching out to the global school, I assumed the next step would be documenting the process concisely. I hoped to follow a simple process for this:
1. Write short summaries of each step in the process
2. Reach back out to the global school for comments
3. Refine and repeat until all the information was present and clear
4. Format into a nice document for publication

Unfortunately, these steps were never able to be accomplished. Instead, I ended up uncovering significant problems adjusting the focus of the project.

6.2 Objective 2: Testing the viability of Montreal as a project center

This objective most closely aligns with the past projects with similar goals. As such I planned to follow a similar path of traveling to the location and focusing on the following while there:
1. Identify potential sponsors/partners
2. Study cultural differences, anything to know beforehand
3. Document out of pocket expenses

Accomplishing this was not impossible without the support of the global school, however, it was more difficult. Ultimately, these tasks were completed during a leisure trip, rather than one dedicated to the project.

6.3 Remaining Objectives

The remaining objectives did not have fully thought out methods, as they appeared throughout the project. As such, they will be discussed later in hopes that a future project team will design a methodology to address the objectives more fully and accurately.

7. Results

Overall, the results were surprising. Throughout the project, I discovered many new objectives that could not feasibly be addressed by a one-person IQP.

7.1 Objective 1: Documenting the creation of a project site

1. Reaching out to faculty and staff led to the determination that a highly motivated faculty member is needed to serve as the project center director. Beyond that, much of the process was vague and uncertain.
2. Current project center directors were open about their roles and responsibilities but had little insight into the creation of new sites. Based upon these conversations, the following seem to be the common responsibilities across most project center directors:
   a. Identify projects and sponsors
   b. Secure housing for the project center
   c. Ensure the safety of the project center and students
   d. Be a conduit to WPI administration while abroad
      i. This role has been described as essentially acting as a dean
3. The global school took some time to set up a meeting with, but I met with Dean Rissmiller who provide a lot of information, however little of it was clarifying. The following is a summary of the meeting:

Opening new project centers:
- In August the number of project centers is estimated based upon the sophomore class enrollment. This is the point at which the need for new project centers is considered.
- There is no process for proposing new project centers.
- In the past pilot programs have failed due to a lack of sponsor support.
- New sites increase risk, which must be carefully managed.
- The administration is looking to increase opportunities in Africa.
- Project sites require a budget, some budgets come from donations that secure the project site's existence.
   o These donations can either be from a company, alumni, or both.
- Partnering with local universities has been successful
- As class size grows, more project opportunities are needed
   o The administration is hesitant to open new locations to manage risk.
- Student interest and demand is important
   o New project sites must be affordable, as some project centers are expensive for students.
- Local transportation must be accessible, renting vehicles to move students is not feasible

Considerations for potential sponsors and projects:
- Sponsors for IQPs should be non-profits or government organizations. Corporate sponsors generally lead to IQPs which should be MQPs
- IQP projects must be a combination of society and technology and require no background other than ID2050

Notes about MQP and HUA projects abroad:
- MQP project centers are different
   o Sponsors pay for students work
   o Students are generally selected based upon past work
   o Generally advised remotely

- o Global school is generally only involved in acquiring visas and completing a health and safety analysis.
- HUA Projects are also different
  - o Needs a faculty member to push for and run the project
  - o Actively looking for more opportunities
  - o The budget for these projects comes from the HUA department, and as such is constrained.
  - o Costs can be mitigated slightly if the location coincides with an IQP project site.

7.2 Objective 2: Testing the viability of Montreal as a project center

1. I was able to visit both Polytechnic and École de technologie supérieure (ETS). ETS is a great fit to partner with WPI due to our seemingly similar cultures and history
2. The culture of Montreal was wonderful and varied. I visited an art museum that depicted just how varied the culture was, however, my short stay left a lot to be desired.
3. Out of pocket expenses were hard to document for the short trip and would likely not scale to a long stay, but overall, the 4 days cost approximately $500 (group travel would affect this number as well)

7.3 Remaining Objectives

When discussing my project with faculty, staff, and students, I came across many common comments. Most of these would require an entire IQP to address so I did not attempt to, however, two of them seemed too important to ignore while establishing a new project center.

The most common comment by far was the lack of consistency across IQPs. This is normally not noticed as everyone completes their IQPs off-campus, however it came to light during the COVID-19 pandemic. It appears the differences start in ID2050 and continue throughout the project. Furthermore, this would explain the wide range of responses received when asking about experiences in ID2050. An entire project could, and should, be devoted to determining these issues.

The other common comment, or lack thereof, was about the clarity of how HUA and MQP projects work abroad. The lack of clarity is shown immediately by the common grouping of them together when they follow different models. HUA projects consist of a single HUA faculty member bringing approximately 20 students to a destination to complete 3/3 units of study over 1 term. These locations are generally at project sites that also have IQPs as local relationships already exist, however they are separate entities. MQPs on the other hand are significantly less structured. From what I found, it is generally a single MQP team (approximately 3-5 students) who go (with or without their professor) to complete their project with their sponsor. These projects are generally poorly advertised and take up an entire term. As such, attendance is generally low as full-term commitments generally require planning from freshman year. Additionally, once a student takes one or two HUA classes (sometimes as early as the fall of freshman year), it might no longer be possible to complete an HUA project abroad.

8. Discussion

While the results found were interesting, they led to little progress toward the creation of the project center. Hopefully, the information I was able to obtain can be used in the future to complete the project.

8.1 Objective 1: Documenting the creation of a project site

While I was able to discover and document more of this process than previously available, there is not much substance to the process. Overall, it was slightly disheartening that there is no set process. Even more disheartening was the sentiment that WPI administration controls the process and there is little insight from students. Instead of looking for feedback before opening the sites, the administration seems to rely upon the IQP application ranking form as feedback. While this might be effective in comparing project sites against each other, it leaves no room to express interest in where WPI expands next.

8.2 Objective 2: Testing the viability of Montreal as a project center

Although short, my visit to Montreal solidified my findings that it would be an ideal location for a project center. The cultural variety exceeded my expectations, especially since the entire city is bilingual. The experience was unlike any other I have had traveling to foreign countries. It is a shame that this much historical and cultural diversity is within driving range, yet WPI has no programs to take advantage of it.

While in Montreal I visited with 2 potential University partners, Polytechnique and ETS. Both schools share a STEM focus like WPI, however, the cultures at each school seemed different. Polytechnique is a subset of a much larger institution and everyone I interacted with seemed focused on classes. ETS on the other hand was a similar experience to walking around our campus. They had an entire building dedicated to student spaces, where students could work on projects that were like many of our clubs. It was also interesting to learn that ETS and WPI share the history of setting out to train tradesmen to become engineers. Although ETS was founded later than WPI, this similarity has led to a culture that would work symbiotically with WPI and our project-based philosophy.

8.3 Remaining Objectives

8.3.1 Consistency Across IQP Experiences

This objective was not investigated as much as I would have liked. Based on what I did find out it seems there exists a lack of clarity as to the purpose of ID2050. Students' experiences vary drastically in the course, both in terms of educational value, as well as the amount of time it takes. Furthermore, there is confusion as to why on-campus IQPs do not require ID2050, whereas IQPs completed at a project center do. These results could be tainted because most of the students I spoke with completed IQP through the Pandemic, however, it seems that many ID2050 experiences can be summed up as an additional 1/3 unit of IQP. Should a project center be established in Montreal, I would hope that the ID2050 experience would be focused on the varied history and culture of the region, rather than taking on projects that could not be completed in the single term designated.

8.3.2 HUA and MQP project opportunities

Based on what I discovered, there seems to be a desire to increase the opportunities for both HUA and MQP projects abroad. To successfully increase these opportunities, the demand for them would need to be increased. This could potentially be accomplished by pushing all the programs equally, rather than IQP getting most of the attention. Bringing attention to all the international project opportunities would allow students to plan their schedule around the best time for them to go abroad, rather than forcing travel into an already busy junior year schedule.

9. Conclusions and Future Work

- Documenting the creation of a project site is difficult when there is no process. Furthermore, the system seems to be at the whim of WPI administration, making any such documentation subject to inaccuracies.
- The cultural diversity of Montreal makes it a perfect candidate for a project site that is accessible, without sacrificing the experiences gained from going abroad.
- Of the universities I visited, ETS seems like an ideal partner for WPI. This needs further work to confirm, and I would recommend a future IQP complete a sample project in partnership with ETS.
  - I would recommend pursuing projects that truly partner with ETS. Due to our many similarities, it is an opportunity to learn from each other and work on projects that could improve both the WPI and ETS communities.
- More work should be put into determining the causes for the wide variety of IQP experiences. Once this variety has been identified, the experiences should be reconciled with the educational goals of IQP. The most challenging part about this would be restructuring projects and ID2050 to ensure a unique experience at each project site, while standardizing the experience across all students, both locally and abroad.
- Based on what I learned, HUA and MQP experiences abroad are fantastic opportunities for those who desire more travel experience, or for those who could not complete a 1 term IQP. I would hope that these experiences become more advertised to ensure the increase in supply is met with an equal increase in demand, as the demand for these projects is less predictable than IQPs.