E-Resources for the London Project Center

An Interactive Qualifying Project
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Abstract

Students at Worcester Polytechnic Institute (WPI) must complete an Interactive Qualifying Project (IQP), usually during their junior year. However, students often have trouble researching project centers and preparing for their trip due to a lack of easily accessible information about the various centers. Prospective sponsors also may not have access to the information they want when considering involvement in a project. By conducting surveys and interviews with past students and project sponsors of the London Project Center (LPC), we determined the types of online resources that would be useful for both parties. We created a website that presents information on the IQP application process, transportation and tourism for students, and an overview of the program itself for sponsors.

Acknowledgements

We would like to acknowledge several individuals for their contributions to this project, including:

Dominic Golding, our sponsor liaison for the London Project Center, Center Director and advisor. His guidance and support through our project, along with his insight into the process of disseminating student and sponsor resources, was essential to our work.

Suzanne Lepage, our advisor, for her acumen throughout the entirety of our project.

We would also like to thank all of the survey and interview participants for assisting us with our research.

Executive Summary

WPI students have the chance to participate in off-campus Interactive Qualifying Projects (IQP) at one of over 50 project centers around the world ("Global Projects Program", n.d.). This is a unique experience, but applying during the beginning of their second year may leave students confused and unable to find the necessary information to construct a good application and understand what living and working at the various project centers is like. Similarly, it can be difficult for organizations interested in working with the LPC to learn about the IQP and network with WPI staff. By creating a new website, we addressed these concerns and provided intuitive, interactive resources for use by students and sponsors looking to learn more about the project center and the IQP program as a whole.

The main objective of our project was to develop new materials to improve the current London Project Center (LPC) website. By providing more detailed yet engaging information, we hope that the new website will help bring more sponsors and students to the center in forthcoming years. The project was completed through four subsidiary objectives:

1. Review and assess the current IQP application process, including current resources available on the LPC website.
2. Determine student and sponsor opinions about current resources.
3. Generate storyboards to outline the resources we are going to create.
4. Create these online resources and incorporate them in an engaging fashion for interested students and potential sponsors.

We reviewed the materials that the GPP and the LPC provide potential students to clarify our understanding of the IQP application and placement processes and identify any confusing areas for applicants. We used this baseline assessment of existing resources to inform the development of new resources that help students navigate the application process. Then, we conducted online interviews with the Interdisciplinary & Global Studies Division (IGSD) staff to further understand the application process and their perspectives on the available e-resources. We focused on understanding applicant qualifications, difficulties that students face while applying, and the availability of online information provided by the GPP.

We supplemented our baseline assessment from our first objective by sending surveys to past and current students of the LPC, and conducted interviews with current and prior project

students and sponsors. Based on gathered information from the interviews, we created storyboards via Lucidcharts to iterate upon ideas of materials for the website. This allowed for visual representation and easy editing to outline the content for the new website.

Based on finalized content from the storyboards, we used Wordpress for web development. The website design included many functionality features to maximize usability. This was supplemented by adding functional visual components to improve website accessibility. We integrated multiple "sensory options" when developing the website, in order to give users the ability to access the information at their own pace. Our findings led us to pivot our website design away from video content and towards concise text-based media with interactive elements.

Based on information gathered from interviews with five IGSD staff members, we created an interactive timeline to display the IQP application, helping students visualize the process (Figure ES1). For the most recent and accurate information, the timeline contains links to the relevant IGSD webpages to ensure that the information on the timeline does not expire. It also includes general, chronological steps of applying for an off-campus IQP to give students a visual idea of how to engage with the application process.
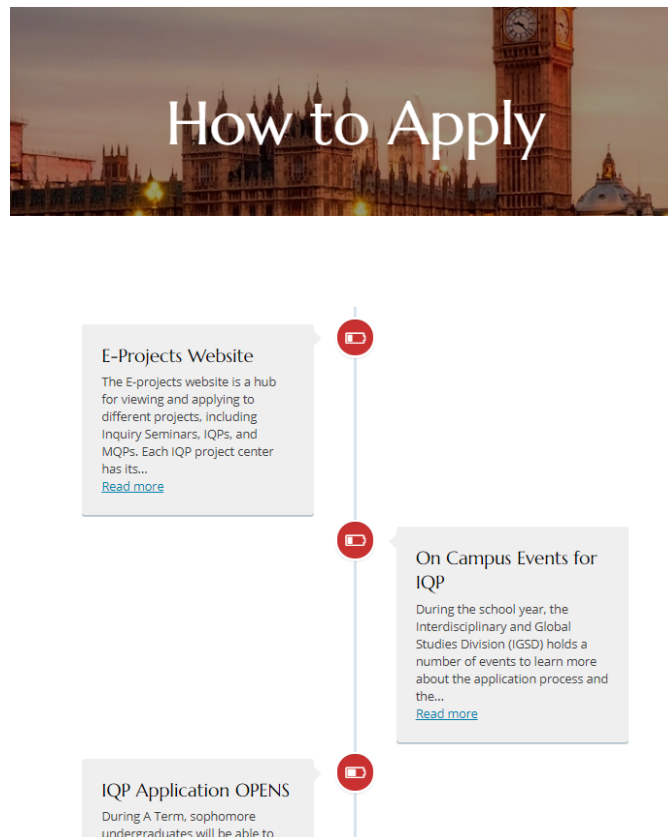

Figure ES1. Screenshot of part of the interactive timeline.

The student surveys indicated that while some topics were covered by the pre-departure materials they had been given, there were many others with either mixed results or completely lacking clarification. Based on these results, we included sections on our website to address matters such as phones and public transportation. To highlight activities past students enjoyed in the city, we created a Google map pinpointing various tourist locations in London that were mentioned in our survey and interviews. A related page detailing local cuisine was also created to give students a better picture of everyday life in the city.

We found that the sponsors had generally good experiences working with the LPC, often holding WPI students above other student programs they worked with in the past. Our interviewees, however, had some suggestions as to how the LPC's online resources could better engage prospective sponsors. Quick, concise, and easily digestible information is preferred, rather than extreme amounts of detail. Short written segments with pictures could be provided, with downloadable PDFs containing more extensive information for the sponsor's future reading and reference. As a result, we modified our sponsor content to fit onto a single page on the website. We created five separate topics that sponsors can click on, each yielding only a small amount of information. If they are interested in hosting a project, they can contact the center director with the information provided on the "Contact Us" tab. One sponsor expressed that there was not a sufficient way for prospective sponsors to view previous projects, despite every past LPC project being available to view on the website. Due to the nature in which project information is stored in the LPC website, we were unable to prioritize creating an efficient method for displaying information on past projects.

Students undergoing the finding, researching, and application for an off-campus IQP can encounter stress, which is further magnified if the information is not easily located. Similarly, finding out exactly what IQP is can prove difficult for an organization without pre-existing connections. To address these two problems, we wrote and conducted surveys and interviews to evaluate the needs of both undergraduate students and sponsors. We found that:

- Short text-based segments are preferable to longer-form media.
- Students are most interested in more information about travel, logistics, and finances.
- Sponsors want a short executive summary-style description of WPI and the IQP.
- Most sponsors learn about the program through word-of-mouth and connections.

We contacted the IGSD staff for their knowledge on the IQP application process and guidance on what information to and to not include. With the information we gathered, we established a Wordpress website to be used in conjunction with the current LPC website. With this online implementation, we hope to garner greater engagement from both students and sponsors.

Other recommendations include networking features on the main LPC website for interested organizations to contact past sponsors, in-person events for sponsors to connect with students, reorganizing how past projects are displayed on the main LPC website and further localizing information on the IQP application process into a single source. While some of the data we gathered was not useful for designing web resources, it may be used by the IGSD or future IQP teams to supplement their own research when creating or modifying media related to the GPP.

Authorship

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Introduction

Students at Worcester Polytechnic Institute (WPI) have the opportunity to complete the Interactive Qualifying Project (IQP) as a part of the school's Global Projects Program, choosing from more than 50 project centers across the world ("Global Projects Program", n.d.). While the project-based learning experience is certainly unique, the process of preparing for the IQP can prove problematic at times. Students are provided a large amount of information from a variety of sources, yet still lack some important information about what life will be like when they are abroad. Similarly, potential sponsors could make use of more information to better inform them about what sponsoring an IQP entails.

Since 1987, more than 450 students at WPI have completed their IQP at the London Project Center (LPC). Among these projects, there are over 100 different project sponsors; various are organizations in London that work with WPI students to solve real-world problems ("Home Page", n.d.). During a single seven-week term, teams of approximately four students work with the project sponsor full-time to conduct research and solve the problem posed by the sponsor.

From the research on how WPI and the LPC currently disseminate information about the application process and off-campus project centers, we found two significant problems. The first problem is the lack of information for students on the current LPC website about the application process, life in London and sponsored projects. There is no clear way for students to see where they would be living in London, how they would travel around the city, or what a day in the life is like for a student completing their IQP. It can even be difficult to figure out exactly what an IQP is and what kind of project they could expect to participate in at the LPC. The second issue is a lack of engaging resources on the LPC website for potential sponsors. Currently, the website lacks sufficient information about past projects and what a student-driven IQP entails. The project's aim is to simplify the research process for students interested in IQP and for sponsors interested in the LPC by providing online tools that are concise, accessible, and easy to navigate. While the LPC website is not the only place that people should look for information about IQP in London, it could be a significantly more useful resource to be used alongside others with some modification.

The goal of our project was to create new online resources for the LPC that facilitate the process of selecting and applying to IQP for students, and becoming a sponsor for interested organizations. To accomplish this goal, we set out the following objectives for our project:

1. Review and assess the current IQP application process, including current resources available on the LPC website.
2. Determine student and sponsor opinions about current resources.
3. Generate storyboards to outline the resources we would create.
4. Create these online resources and incorporate them in an engaging fashion for interested students and potential sponsors.

The online resources we created for students and sponsors are consolidated in a new website to be used in conjunction with the current LPC website. This new website provides student applicants with more information on applying for an IQP, traveling to and around London, and leisure activities while in the city in an interactive format. The website also provides interested sponsors with brief, relevant information encompassing IQP project hosting and the involvement of WPI students. We created the website to provide a streamlined, comprehensive online resource for students and potential sponsors, with the future recommendations of networking features for plausible capabilities of connecting with current LPC sponsors for word-of-mouth communication about experiences with WPI.

Background

Worcester Polytechnic Institute has a unique approach to technical education, both among national peers and worldwide. As outlined in the WPI Plan, the university focuses on practical applications of skills, project-based learning, and problem-solving ("The WPI Plan", n.d.). In keeping with this focus on real-world problem-solving, WPI has created the Interactive Qualifying Project (IQP), a seven-week term-long interdisciplinary project focusing on issues at the intersection of technology and society. The Global Projects Program (GPP) allows students to complete their IQP at one of over fifty project centers around the world, working in teams with students in other majors to solve a wide variety of problems facing modern societies ("Global Projects Program". n.d.).

The WPI Plan was put into effect in 1970, after almost half a decade of reorganization. The Science, Technology, and Society (STS) movement was sweeping through technology and science focused institutions, with the Accreditation Board for Engineering and Technology (ABET) requiring engineering students complete half a years' credits in social sciences and humanities (Schachterle & Watkins, 1992, pp 50-51). To keep up with the trend of engineers being knowledgeable of social issues and maintaining ABET accreditation, as well as reinvigorate its own students and staff, the WPI Plan was formulated. WPI went from a rigid, militaristic men-only school of structured schedules and mandatory ROTC to a more open institution, taking into account feedback from students and faculty. The initial WPI Plan revolved around two projects required to complete an undergraduate degree, to instill "a strong degree of self-confidence, an eagerness to contribute to the community beyond oneself, and an intellectual restlessness, a spur to continual learning" in the students ("A Miracle at Worcester: The Story of The WPI Plan (Part 1)", n.d.). The IQPs are designed to be interdisciplinary and focus on topics at the intersection of society and technology, while the Major Qualifying Project (MQP) is directed towards a particular major. A Sufficiency was also added; a capstone project aimed to emphasize humanities in a primarily engineering-focused curriculum. All three projects continue to be graduation requirements for all WPI students. The radical shift in WPI's approach to education caused many of the older faculty to leave, but left the institution as a unique and modern example of a multifaceted polytechnic university ("A Miracle at Worcester: The Story of The WPI Plan (Part 1)", n.d.).

WPI students can complete their IQP on or off-campus or abroad at one of the school's many project centers. Rather than taking classes, students conducting off-campus IQPs work full time on their project, typically in collaboration with a local sponsor. Students are embedded in local organizations and work hands-on with local stakeholders (e.g., government officials, businesspeople, non-governmental organizations, and residents) to address issues of concern to the host organization and broader community. This is clearly quite different from typical study abroad programs at other American colleges. For example, New York University's (NYU) program has students take academic courses at one of their study abroad locations (New York University, n.d.). Both programs are similar with respect to allowing students to complete a graduation requirement; however, the day-to-day experience is quite different. WPI students work on their project as a full-time job, while NYU students take classes like they would as if they were still on campus. WPI's approach prepares students for future professional work, not just through academic acumen but a working knowledge of project planning, organization, communication, and execution.

1. History of the London Project Center (LPC)

WPI made the IQP a requirement for all students in 1973 with the first off-campus project center based in Washington D.C., chosen due to its position at the center of battles for a new legislature in the face of technological and societal change ("Washington, D.C.", n.d.). The success of this project center influenced WPI's decision to create an international project center located in London. The main reasoning for creating a project center outside the United States was that it enhances the experience that the IQP was created to provide (Schachterle & Watkins, 1992, pp 52). According to Schachterle and Watkins:

> ...the goal of the IQP was to learn about technology interacting with society, examining that interaction in a culture new to the student could heighten the student's awareness of the interaction and teach students how to function as professionals in new cultures (Schachterle & Watkins, 1992, pp 52).

The reasoning behind choosing London as the location of the first international project center was two-fold. For the 13 years prior to becoming a project center, the WPI program in London

was a student exchange program with The City University (Schachterle & Watkins, 1992, pp 52). As a result of this, WPI already had various contacts in the area. Additionally, the transition from American to British culture seemed to be less jarring due to the similarities between them, thus making it easier for the first group of IQP students to adjust to their new surroundings (Schachterle and Watkins, 1992, pp 52).

The London Project Center (LPC) was created in 1986, with the first IQPs at the project center occurring in April 1987. The first projects at the LPC began in 1987 with 12 students: four teams of three students. Each group worked with a sponsoring organization in London. In the following year, the number of teams at the LPC increased to five (Schachterle & Watkins, 1992, pp 53). Since then, over 450 projects have been completed at the LPC ("Home Page", n.d.). As of March 2020, six teams, ranging from 4-5 students, work at the LPC in one of the three terms it is open per year. The LPC is now one part of the larger Global Projects Program (GPP) at WPI, which seeks to provide students with the opportunity to complete an IQP, MQP or humanities project abroad ("Global Projects Program", n.d.).

2. The Global Projects Program Application Process

The LPC Center Director, GPP staff, and faculty provide a variety of information to students during the application, preparation, and onsite implementation phases of the IQP process. The eProjects website was created to consolidate all the different outlets of information, containing all the standard information about each project opportunity (D. Farmer & J. Richard, personal communication, April 7, 2020). This includes logistical details (housing type, transportation, etc.), budgeting information, and typical project topics. During the beginning stages of the application process, students use the website to view the various project opportunities, which can be filtered based on the project type (Humanities, IQP, MQP, Exchange), academic year, on or off-campus, and area of study (applicable for MQP projects). It also showcases a "Forms Library" for students to submit the necessary forms before commencing their projects (www.eprojects.wpi.edu).

The LPC website supplements the efforts of the Center Director and GPP staff in providing information about the IQP in London to students. It is an online resource that encapsulates more e-resources about WPI's IQP program in London. Currently, it includes six

categories: "Home Page", "WPI Program", "Projects", "For Students", "For Project Hosts", and "Contact Us" ("Home Page", n.d.). On the "Home Page" section, students would be able to view the history of the LPC, previous projects conducted, and the typical types of organizations sponsoring the projects. The "WPI Program" section offers a short paragraph about the WPI community and academia, as well as an overview of the IQP and WPI's GPP ("WPI Program", n.d.; Figure 1).
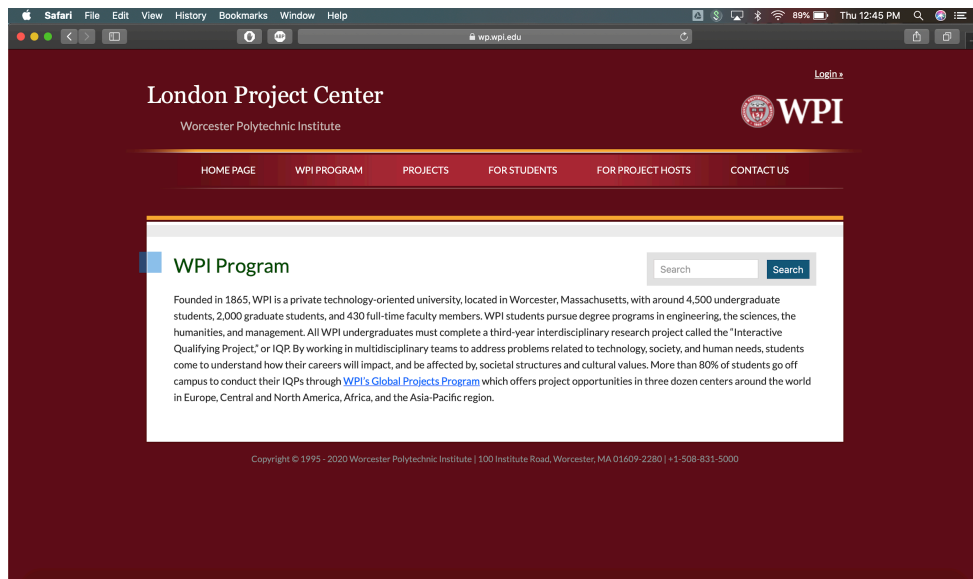
Figure 1. Screenshot of the current LPC website describing the WPI Program.

The third section, "Projects", has the most e-resources out of the six categorized sections of the LPC website. It includes executive summaries of each project done in London as early as the spring of 2010. The projects under this section are categorized by subsections, which are titled by the year and term they were completed (e.g. "2019 Projects - Summer") ("Projects", n.d.). Along with the executive summary, the section describing an individual project includes the names of the students in the team, their sponsor and sponsor liaison, and the links to their presentation and final report. Some project sections include pictures of the teams from their site or presentation day.

The next section, "For Students", includes short paragraphs for interested students to understand how the GPP and LPC run their on-site projects. The section also mentions a brief history of London, and other locations or cities nearby that students can easily travel to for a

weekend trip ("For Students", n.d.). The last paragraph in this section includes links to WPI alumni, detailing interviewed questions about their IQP experiences, and their answers.

"For Project Hosts" is the fifth section of the website that is directed towards sponsors. Similarly to other sections, it is composed of a few paragraphs. It allows project sponsors to grasp an understanding of the IQP and what the students would do for them and their organization throughout the 7-week on-site period. The section also includes a link to an informative presentation to explain details on student placements into the LPC ("For Sponsors", n.d.). The last section, "Contact Us", features the phone number, email, and image of the center director, Dominic Golding ("Contact Us", n.d.).

Applying for the GPP is a complicated process with multiple steps, which has evolved over time from a paper-based system with face-to-face student interviews to a largely online system with an automated matching algorithm. Students are offered several outlets of information to aid their search in off-campus project centers. The Global Fair and Where to Go Wednesdays are examples of on-campus events that give students a chance to ask relevant faculty their questions about the program. These sessions along with access to the eProjects website allow for a more detailed view of the project centers themselves and their associated terms. Other outlets of information include informational packets such as the undergraduate course catalog and the Global Handbook. Once the student has their project center preferences from their research, the application process begins, involving the submission of multiple short essays, their resumes, and two-character references ("How to Apply", n.d.). WPI offers on-campus resources such as the Career Development Center (CDC) and the Writing Center to help students with their resumes and short essays. The application process is open for less than a month, meaning students must take the initiative to complete extensive research in order to apply by the application deadline. If students miss the deadline, they can participate in four later supplemental processes, which offer opportunities for students to apply for available off-campus sites or change their project center decisions and re-apply (D. Farmer & J. Richard, personal communication, April 7, 2020).

Methodology

Our main objective was to develop new materials to improve the current London Project Center (LPC) website. By providing detailed information in a simple, straightforward and engaging manner, we hope that the new website will help bring more sponsors and students to the center, allowing it to thrive for years to come. The project contains four subsidiary objectives:

1. Review and assess the current IQP application process, including current resources available on the LPC website.
2. Determine student and sponsor opinions about current resources.
3. Generate storyboards to outline the resources we are going to create.
4. Create these online resources and incorporate them in an engaging fashion for interested students and potential sponsors.

1. Review Application Process

The Global Projects Program (GPP) has substantially revised the off-campus IQP application process in recent years. The application is now conducted entirely online and most of the resources are delivered through video and other online media rather than on paper and in person. Nevertheless, the application and placement processes are complicated and confusing to all. We reviewed the information and materials that the GPP and the LPC provide potential students to clarify our understanding of the IQP application and placement process and identify those areas that are likely to be most confusing to applicants. The GPP and LPC provide many materials to students regarding these logistical details, but the materials are not always as clear or engaging as they might be for students and it is difficult to navigate the process. Subsequently, we used this baseline assessment of existing resources to inform the development of new resources that help students more easily navigate the complicated process.

1.1 IGSD Interviews

We conducted thirty-minute online interviews via Zoom or phone call with the GPP and IGSD staff to gather details about the IQP application process and their perspectives on the available online resources for undergraduate students. We divided the structure of the interviews into two parts - the first part involving specific questions for the interviewee based on their role in IGSD, and the second encompassing general IGSD questions (see Appendix A). The general questions include applicant qualifications, typical application process difficulties that students encounter, and the availability of information that the GPP has provided through their online materials.

We began these interviews by emailing the preamble in advance to discuss the purpose of our research, as well as to outline the interviewee's rights and consent for participation. We also restated the preamble at the beginning of each interview to ensure that interviewees clearly understood the purpose of the interview. We then asked the interviewee for verbal consent to the terms outlined in the preamble, as well as for consent to record the Zoom interviews. Personal information collected from each interviewee only required their name and email (Appendix A). One student in the group led the inquiries, and another student was in charge of taking notes during the interview. The remaining students aided in facilitating the questions, and asked follow-up questions that may have emerged based on the participant's response.

2. Past Experiences with the LPC

We supplemented our baseline assessment (Objective 1) through surveys of past and current students of the LPC as well as interviews with current and prior project students and sponsors.

2.1 Student Surveys

We conducted a survey of students who completed their IQPs in London since 2015. The center director maintains a listing of past students, but we focused on the past five years for three reasons: (1) this is the period during which the application and placement process moved online; (2) the Class of 2016 was the first class to receive their WPI email address for life (thereby facilitating outreach); and (3) student recollections of the process and experience will still be

relatively fresh and current.

      The survey focused on what information students received when applying for the GPP, what resources they used to gain this information, and what topics they would have liked more information on prior to applying (see survey instrument in Appendix B). We asked these same questions again, but about the time period in which they were preparing to go to London specifically. The survey also asked short answer questions about their experience with their sponsor and what locations they would recommend visiting while abroad.

      We chose to use surveys to gather this information since more than 200 students had participated in the program since 2016. Also, many of the LPC alumni have graduated and live in different time zones with different schedules and responsibilities, so interviews were conducted online through Zoom. A survey allowed us to gather large amounts of information in a short amount of time. We drafted an initial list of questions, which we submitted to our advisors for feedback. Our group then iteratively improved upon the draft until we had a satisfactory set of survey questions. We then entered the questions into Qualtrics, a survey platform that allows for easy distribution of surveys and collection of data, and sent out the survey to our classmates to pretest the instrument for clarity and comprehensibility. After making the changes our peers recommended, we sent out a link to the survey in an email to current and past students of the LPC. The email also had a link to a OneDrive folder that allowed students to upload pictures from their time in London. As an incentive to complete the survey, each participant was offered the chance to be entered into a raffle for a $25 Amazon gift card.

      The survey began with a brief preamble describing the purpose of the research as well as notifying the respondent that their participation is completely voluntary and their responses were anonymous. At the end of the survey, the respondent was redirected to a separate Qualtrics survey, where they could choose to sign up for the raffle as well as for a follow-up interview (Appendix B). This allowed the emails of the respondents to be held separately from their survey responses, thus preserving their anonymity. We used Qualtrics to generate graphs and charts for the questions that lent themselves to quantitative analysis. The short answer responses were collated and coded into a spreadsheet. Then, we reviewed the responses of the students and identified common themes and ideas that could be used for the LPC website, such as useful resources to include on the "For Students" page. These ideas were outlined in a rough draft of a storyboard.

2.2 Student Interviews

The student interviews were separated into two parts, with questions pertaining to their experience in London and soliciting feedback on the student content storyboard. For the first portion of the interview, the questions were designed to gain information about student experiences in London. The questions involved topics such as student and sponsor relations, their specific project and its outcome, and places in London they recommend visiting. For the student content storyboard portion of the interview, we asked for students' recommendations on how to improve our current storyboard. We also asked questions about what resources they think would be useful and how the new materials should be displayed (Appendix C). From their feedback, we iterated upon the student content storyboard to better outline the resources that we were going to create.

We used semi-structured, in-depth, qualitative interviews of twenty to thirty minutes in length via Zoom. According to Lune and Berg, a semi-structured interview (which they refer to "semistandardized") allows for a flexible order and wording of questions. Furthermore, a semi-structured interview allows the interviewer to ask follow-up questions based on the interviewee's responses (Lune & Berg, 2017, p. 68). This allowed us to ask additional questions as we learned more information about each student's experience with the LPC. While a structured interview format could have been used, it would not have provided any room for these additional questions.

The interviews began with a preamble explaining the nature of the research, the conduct of the interview, and the rights of the interviewee, such as the right to review materials prior to publication. The only personal information that was collected for the interviews were the participant's name and their email (which were already obtained from the survey). The respondent's name was associated with the interview notes and they were given the opportunity to review any material that included the interview before it was published (Appendix C). This preamble was emailed to the participant before the interview, and we asked them to provide their written consent via email response. At the start of the interview, we restated the preamble and asked for their verbal consent. One team member led the questioning and another acted as a scribe to ensure that we captured the content of the interview.

2.3 Sponsor Interviews

The project sponsor interviews focused on what about the LPC interested the sponsor and what information they think would be useful to know before sponsoring an IQP. We then used this information to create a sponsor content storyboard, which outlined the types of content that we would add to the new website for potential sponsors (Appendix D). The LPC director provided us with a list of potential sponsors to interview and emailed them to ask if they were interested in participating.

These interviews were semi-structured and conducted via Zoom, similar to the interviews conducted with the students. This allowed us to ask any follow-up questions that arose during our discussion with the sponsor.

The sponsor interviews began with a preamble similar to that of the student interviews. It explained that participation was voluntary and that the participant could stop the interview at any time. The only personal information that was collected was the participant's name, which was included in the published material. The participant had an opportunity to review any material including their interview before it is published, and could request changes or deletions (Appendix D). Before the interviews, we emailed the preamble to each participant and asked for their written consent via an email response. At the beginning of each interview, we restated the preamble and asked for their verbal consent. One person led the questioning, while another acted as scribe and took notes.

3. Storyboards

We created storyboards to iterate upon ideas of materials for the website. The purpose of a storyboard is to provide a visual explanation of a website's content to present to users, gaining feedback and making changes without needing to create and modify the full website itself. Initial storyboards were created for student-facing and sponsor-facing content. We constructed student-facing storyboards using the responses we gained from student surveys, and we collected feedback on them during follow-up student interviews. We then made new drafts of the storyboards using the feedback from the interviews, before implementation into the website proper (Appendix E). We also made sponsor-facing storyboards based on information gathered during sponsor interviews, and iterated on them through discussion with advisors (Appendix F).

We used Lucidcharts to make all our storyboards, allowing for easy visual representation and editing of content.

4. Online Resources

Website development and UI design involves incorporating relevant information for the purpose of delivering information effectively. Website design is broken up into three stages, "(1) gathering data to determine needs; (2) design and development; and (3) revision, testing, and launching" (Wu & Brown, 2016, p. 161). We used Wordpress for web development, since it is an easily operated tool that helps with content organization. Wordpress is also already in use by WPI, allowing for easier integration of the new webpages. Using Wordpress allowed us to test iterations of website designs without publicly launching the new content.

For the first step of gathering data based on needs, our group organized the content from the student and sponsor storyboards, separating the information by category. After we gathered all of the information from the storyboards, our group began the second step of website design and translated the final draft of the storyboards into Wordpress. When designing and developing the new website, we included the five subsequent components of website design: logical sequencing, multiple "sensory options," functional visual components, and accessibility help menus (Sutton, 2016). The online resources for the LPC website were directly translated from the student and sponsor storyboards, beginning with a quick outline of content. Each website iteration included further development of each online resource. While making edits to the old LPC website, our group made sure it aligned with the website design template, a design outline provided by WPI for the LPC website. For the edits to the new LPC website, we followed our own design templates, allowing for freedom in design concepts and content. In order to decide on how to incorporate our content onto the website, we consulted with the WPI IT Department about the advantages and limitations of the current website and how to effectively update it with the new materials. The website was designed in a way to maximize usability and accessibility.

Organizing materials in a logical way is essential when delivering information through a website. Users will "be able to immediately get a grasp on how to make sense of the information we have laid out on the page" (Sutton, 2016). The information does not have to be over explained or shortened, but makes sense and delivers the intended content, improving the overall accessibility and engages more than just the student audience (Sutton, 2016). We implemented

this component into our application process timeline and made sure the content aligned with the information provided by the IGSD and integrated the timeline onto the website in a relevant manner.

Our group integrated multiple "sensory options" when developing the LPC website, giving the user more freedom to access the information at their own pace. Incorporating different options to access information prevents trapping "users into certain sensory experiences" and allows them to get as much information that is needed for the user (Sutton, 2016). For example, all media content had text captions describing their purpose or a description of what the image depicts.

Our group utilized functional visual components, which improved the accessibility of the website. The visual components were not only visually appealing but assisted the user in gathering the intended information from the website. The online resources were placed where their content complements the text and should provide a different approach on content delivery, not repeat what is said in the text (Sutton, 2016). For example, our interactive map was accompanied by a brief text description on what type of content it displayed.

Navigation through a website was also aided through accessibility help menus, allowing users to see the general purpose of the website from one location. Our website has the menu accessible from most pages on the website, which allows users to choose the content that is most relevant to their experience. This improves usability because the website user population can be broken up into WPI students, potential sponsors, advisors, and general visitors. By incorporating all of these elements in the website design, the end result elicited "efficient modes of information exchange on [the] site" (Sutton, 2016).

Once the website design and development stage was completed, our group began the final stage of website design: revision, testing, and launching. Our group reviewed our final website draft with the IGSD staff, and student and sponsor interviewees in order to aid in the revision process. Each iteration of the website design was tested until all of the feedback had been successfully incorporated. When the website design reached its final iteration, it was published onto the Bluehost server as the new LPC website to be used by the intended audience, maintaining an open resource for feedback from current users.

Findings

The surveys and interviews we conducted with students, sponsors, and IGSD staff gave us an extensive base of information with which to develop our website. We modified our storyboards according to feedback we received and added new elements based on the comments made by our subjects. Most importantly, our findings led us to pivot our website design away from video content and towards concise text-based media with interactive elements. While some of the data we gathered was not useful for designing web resources, it may be used by the IGSD or future IQP teams to supplement their own research when creating or modifying media related to the GPP.

The location of our online resources also changed from our initial plans as we began development. We found there were severe restrictions on our ability to edit and otherwise adapt the current London Project Center website, so our group decided that creating the website with a different hosting site would be the best option. From our research, we found that Bluehost suited our needs for a reasonable price, giving us full access to the plugins Wordpress provided.

1. IQP Application Timeline

Based on the information gathered from the interviews with the five IGSD staff members, we created an interactive timeline to help students visualize the IQP application process (Figure 2). We determined an order of materials that mirrors the IGSD's guidelines for preparing for an off-campus project and included GPP-hosted preparatory events that are recommended for students (e.g. Global Fair, sophoMORE Success Program).

We conducted online interviews with five members of the IGSD staff through Zoom over the course of three days. We obtained detailed information encapsulating various aspects of the off-campus IQP application process. After interviewing the members, we gathered that the IGSD has a detailed, intricate method of determining the qualifications of an applicant and their placement into the program. From these interviews, we learned about the common questions that students typically ask the IGSD while navigating the IQP application process. Some questions gravitate towards the application itself, such as essay length and open spaces in a certain project center (D. Farmer & J. Richard, personal communication, April 7, 2020). Other questions, however, include personal concerns, such as dietary restrictions, participation in sports, local

customs and norms in a site, housing conditions and arrangements, and safety for members of the LGBTQ+ community (A. Ogilvie, personal communication April 6, 2020).

We concluded that the timeline would properly organize all information by sectioning it into five main steps: View eProjects for project sites, On-campus events to further learn about the IQP project centers, IQP application opens, IQP application closes, and the IQP Site Decision Day (Figure 2). In each of these sections, users can click on "Read more" to go to a full page with more detailed information about that step. This timeline was designed to provide a general overview of how the application process works. For the most recent and accurate information, the timeline contains links to the relevant IGSD webpages to ensure that the general information on the timeline does not expire.

The first event we created on the timeline is titled "E-Projects Website" to give applicants a better understanding of the eProjects website's significance. We decided to start the timeline with a briefing of eProjects based on the interviews we conducted. According to the interviews with members of the IGSD, eProjects is the main resource that is readily available for students to provide information about different projects. An IQP applicant would be able to find standard information so that students can make sure to grasp a better understanding of each project center (D. Farmer & J. Richard, personal communication, April 7, 2020).

The second event on the application timeline is titled "On Campus Events for IQP". During the beginning of the application process, students can attend a variety of events held on the WPI campus. The Global Fair, which is held either before or shortly after the IQP application is open to students, is a kickoff event that serves as a "one-stop hub for off-campus IQPs" (D. Farmer & J. Richard, personal communication, April 7, 2020). We also included links to the official IGSD web pages to allow students to be aware of up-to-date and accurate information for event announcements.
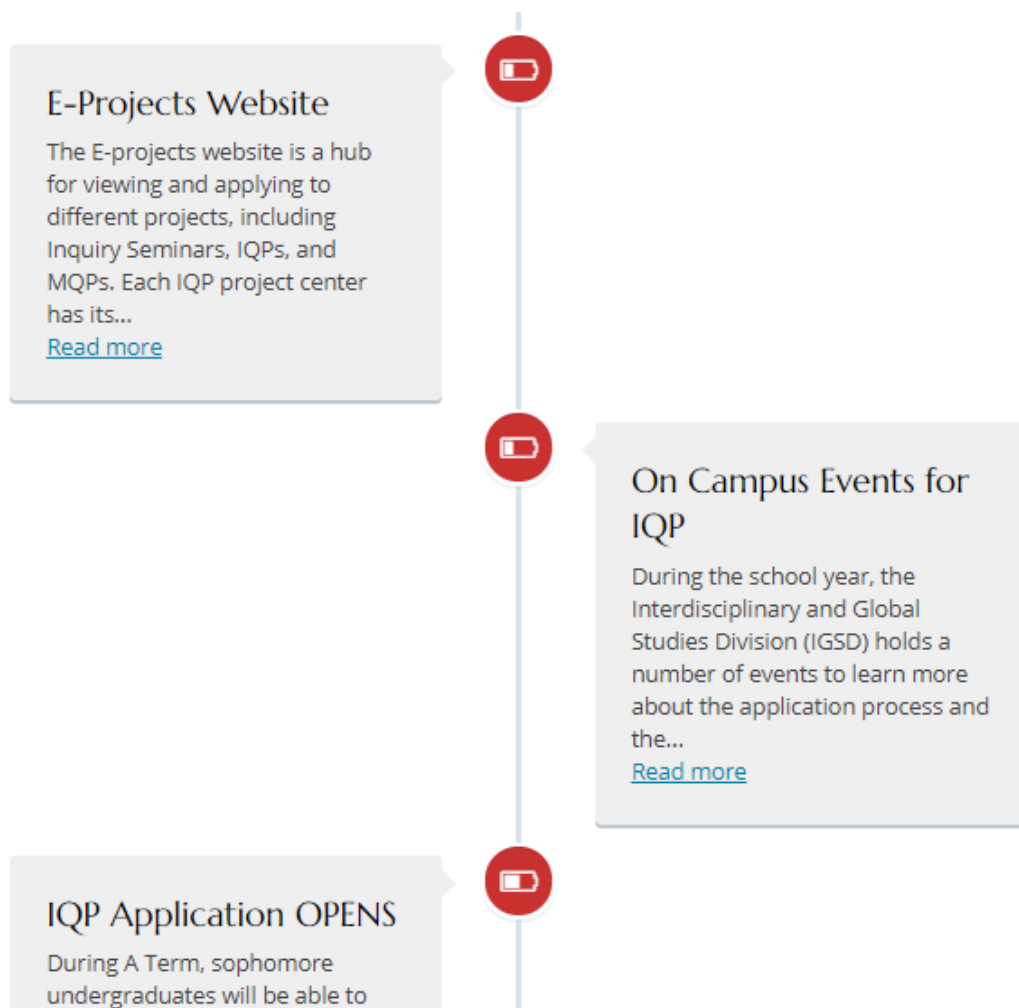
Figure 2. Interactive timeline of steps involved in the off-campus IQP application process, demonstrating the first three main steps.

Furthermore, the third event on the timeline denotes the period when the IQP application is open and available for students to enter information (Figure 2). It includes a brief overview of the requirements for submission. Based on our interviews with the IGSD staff, two readily available resources for assistance in filling out the IQP application are the Writing Center and the Career Development Center (CDC). The application involves some short-answer and essay questions, so members of the IGSD recommend booking an appointment with a tutor from the Writing Center for applicants to receive feedback on their essay drafts. The IGSD also encourages applicants to take advantage of the CDC while applying for an IQP for the resume submission requirement of the application (D. Farmer & J. Richard, personal communication, April 7, 2020). We integrated this information into the "IQP Application Opens" event of the timeline to remind students of the on-campus resources that can be utilized once the application has been opened.

We titled the fourth event "IQP application closes" to showcase what students could expect after they have submitted their applications (Figure 3). From the interviews with the IGSD, we gathered information about the applicant qualifications of a student undergoing the application process. We learned that individual center directors are responsible for reviewing a random set of applications and giving a score. First, the IGSD evaluates the applicant as a whole in order for the students to gain acceptance into the GPP, and project center directors have a budget of applicant priorities that they use to tailor to their project center. For instance, the language requirement for Spanish is a large factor for the Asunción, Paraguay Project Center. Conversely, language skills may not be heavily weighed for centers in other countries and are not a requirement for the LPC. Academic performance, language skills, and writing abilities are weighted differently by each center director to determine the type of applicant they are looking for (D. Farmer & J. Richard, personal communication, April 7, 2020). On a technical perspective, the IGSD implements an algorithm to sort applicants into project centers. The three parts of this algorithm involves student preference, application scores, and center director survey. Each part is scored such that the student preferences are heavily factored, and the director preference is least weighted (D. Fusaro, personal communication, April 8, 2020).

The last event, "IQP Decision Day," pinpoints the time when IQP applicants have received their project center placement (Figure 3). We included reminders for students on what to expect after they have been notified of their locations, including ID2050 and PQP registration,

passport validity, and visas. For the LPC, students with US passports do not require visas; however, an applicant who does not have a US passport may need a visa to travel. Currently, students without US passports who are interested in traveling to London for their IQP without a US passport can apply for a visa through the United Kingdom government website. If these students do not have reciprocal visa arrangements with the UK, they can obtain a short term study visa (C. Ruta, personal communication, April 6, 2020). On the website, however, we encourage the students to contact and verify visa requirements with the IGSD directly rather than attempting to provide comprehensive information that may be misinterpreted or out of date.

IQP Application CLOSES

You will receive your project center placement late December (usually during winter break). There are three main factors that are taken into account when placing...
Read more

IQP Decision Day!

Congratulations, you have been given your project center placement! At this point, The Global Projects Program has emailed you the location and term of your...
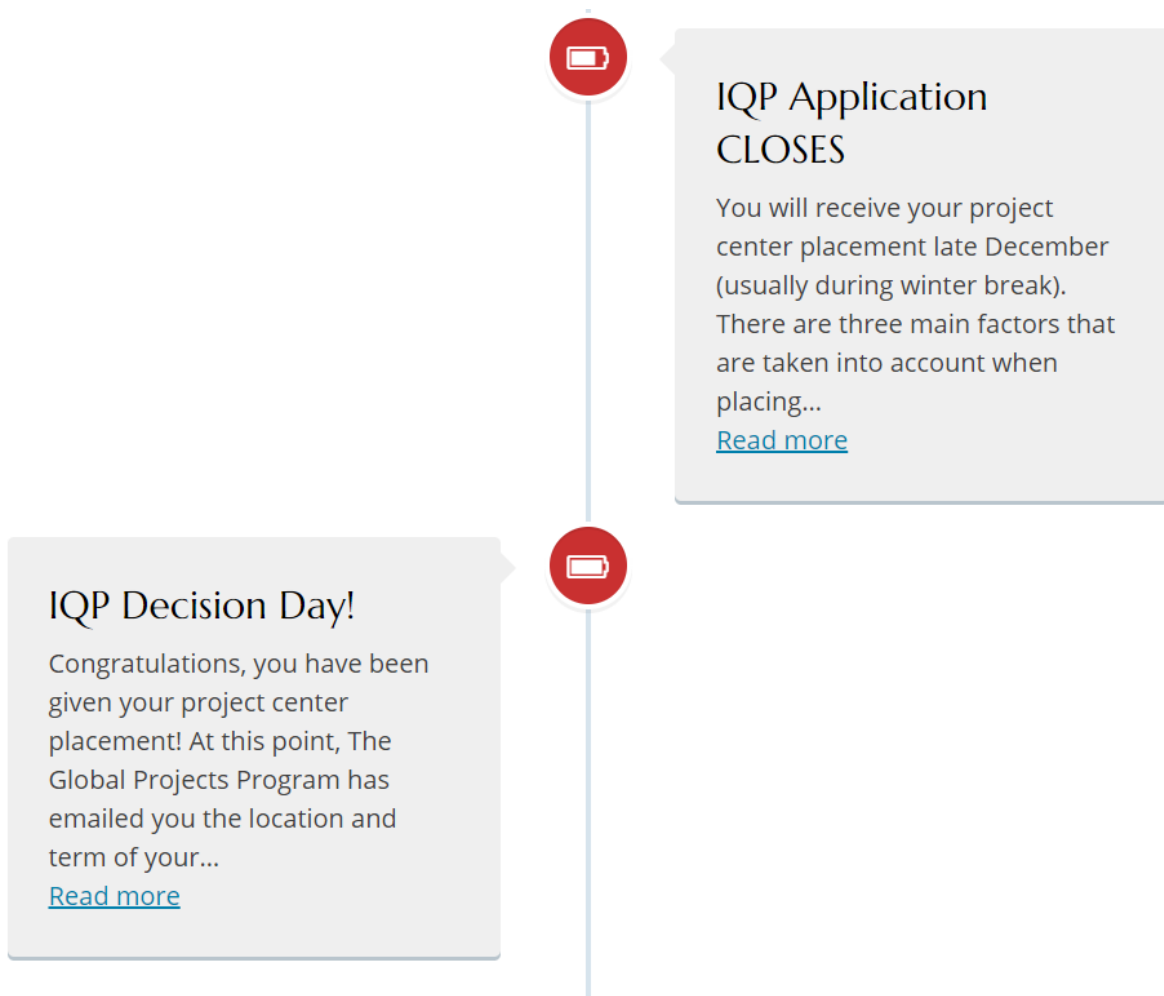Read more

Figure 3. Interactive timeline of steps involved in the off-campus IQP application process, demonstrating the last two steps.

2. Student Resources

The student surveys indicated that while some topics were covered by the pre-departure materials they had been given, there were many others with either mixed results or completely lacking clarification. The website's purpose is to localize and provide a sufficient amount of information for students seeking to learn more about their potential IQP with the LPC. We initially planned on including a compiled list of past projects on the new LPC site, however, technical difficulties due to the different hosting platforms of the old site and ours prevented us from porting the information over. Our final product instead links directly back to the projects listing page on the old LPC website whenever necessary.

2.1 Information on Site Selection

According to Figure 4, students who responded to the survey found that other students were the most effective resources for information about project centers. The project center website and the Global Fair were also considered effective resources for this purpose. For most of the respondents, the undergraduate course catalog and academic advisors went largely unused. While a large number of respondents did not seek information from IGSD staff, the majority of those who did use them found them somewhat effective (Figure 4).
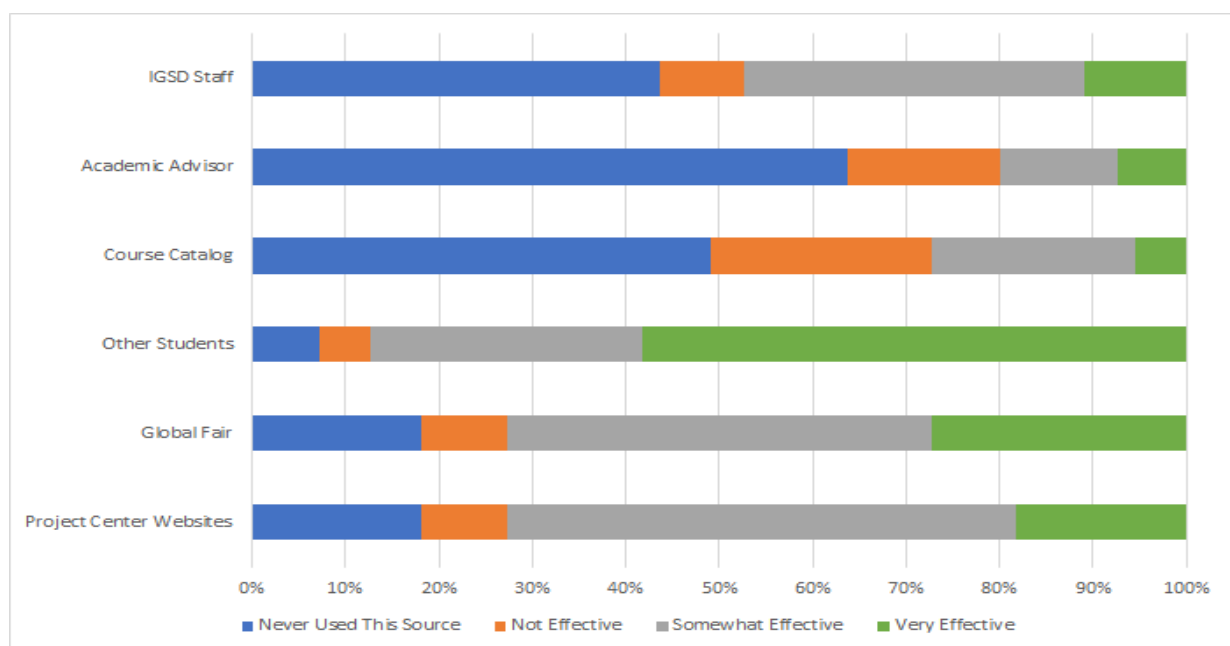

Figure 4. Effectiveness of resources for information for selecting a project site (n=55).

While the survey results seemed to indicate the eProjects site video was not used by a lot of respondents, there were also a large number of respondents who applied for IQP before eProjects was released during the beginning of the 2017-2018 academic year. For this reason, we only analyzed the effectiveness of eProjects from the last three terms. Figure 5 shows the effectiveness rating of the eProjects site video for selecting a project site by the academic term the respondent went abroad. The graph shows that the video was considered to be effective in helping students choose a project site, although the number of responses is quite small and may be misleading (Figure 5).
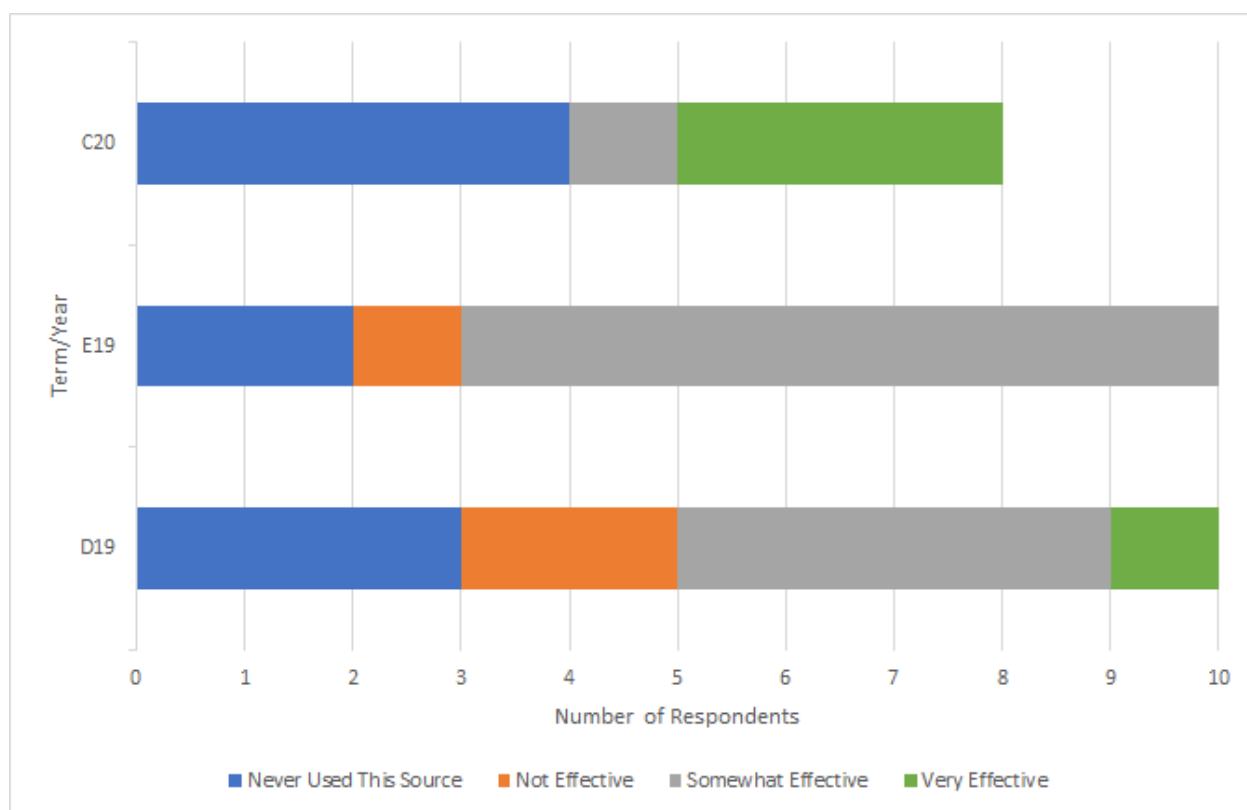
Figure 5. Effectiveness of eProjects site video for selecting a project site by academic term.

We implemented this feedback into our student resources by highlighting various sources of information in the application timeline. Students are encouraged to use resources that are considered effective, such as the Global Fair and eProjects, as a part of the application timeline. The timeline also highlights the lesser used resources in an effort to ensure that students use all the materials that are available to them during the application process.

2.2 Information on Application Process

According to Figure 6, survey respondents indicated that, during the application process, they received a sufficient amount of information about the application timeline, logistical details, finances, health and safety, housing, and food. However, they did not feel as though they received sufficient information about booking flights, public transit, phones, and tourism activities during this time (Figure 6).
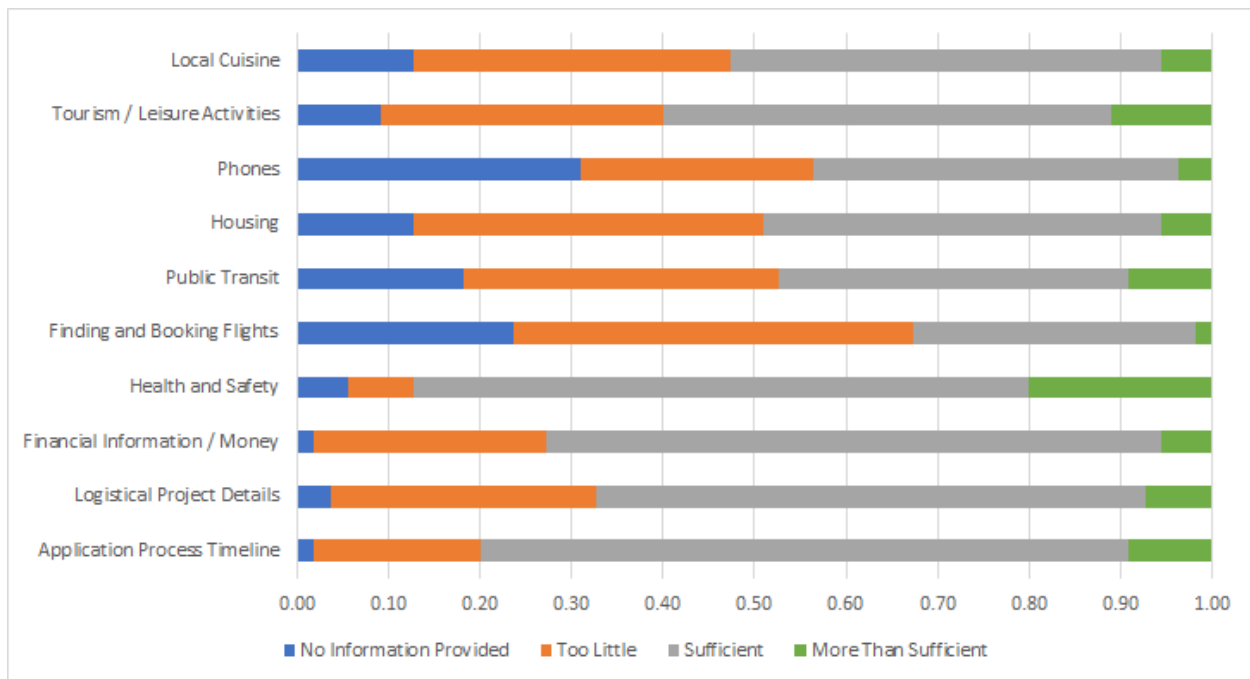

Figure 6. Sufficiency of information provided during the application process (n=55).

According to Figure 7, respondents preferred receiving this information via a written medium. While short videos were preferred over longer videos, both options were significantly less attractive than information provided in writing, slideshows, and printable PDFs (Figure 7). In the short answer section of the survey, a few students discussed this reasoning. They found written information to be convenient since they can refer back to it easily. With videos, students would have to search the video for the correct time in which the desired information is presented. Our website emphasizes that preference by putting less focus on video content and, instead, including useful information through text in an interactive format. The website incorporates

useful text with other forms of media content, allowing the user to interact with the website while researching the project center.
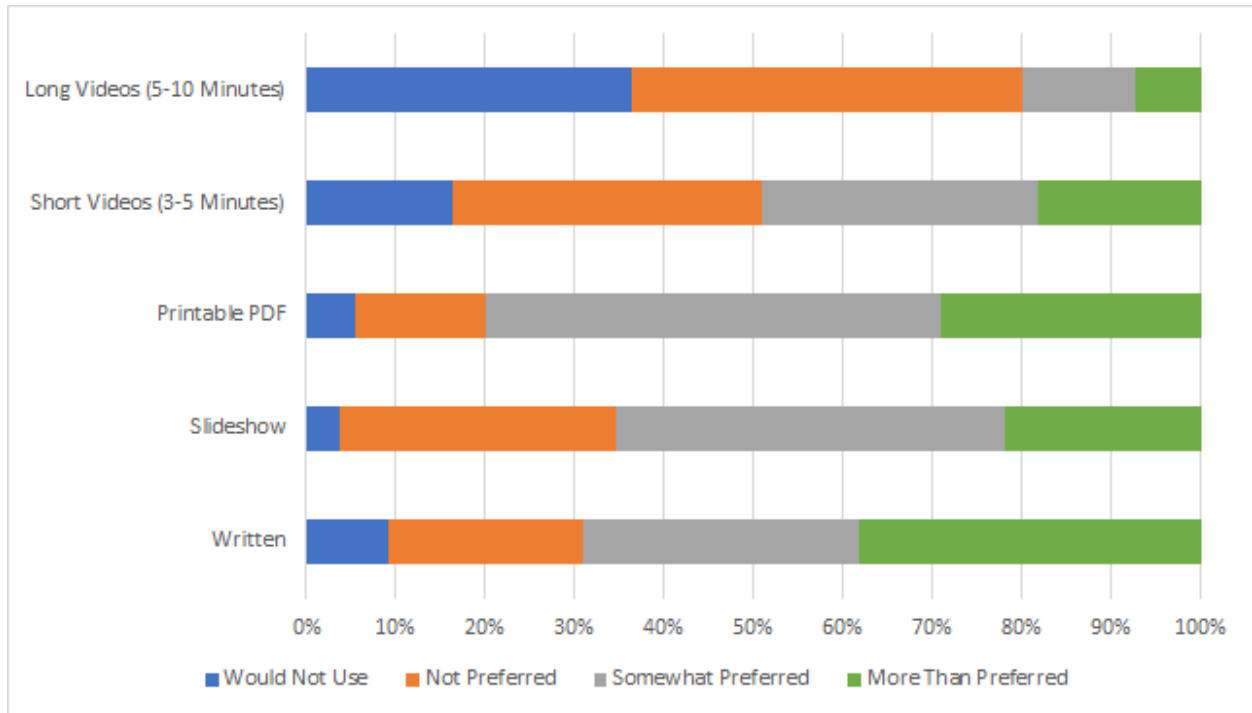

Figure 7. Preferred form of information on the IQP application process (n=55).

Based on these results, we included sections on our website to address matters such as phones and public transportation. These pages address topics such as where to buy a SIM card, where to get an Oyster card, how to ride the tube, etc. In both surveys and interviews, students expressed a lack of confidence in scheduling flights and wished that more resources were provided to assist with the process. We added an interactive calendar element to our student resources storyboard and brought it up during the remaining interviews, receiving positive feedback on the idea. The calendar would allow students to view departure dates of the other members of their IQP, making it easier to coordinate flights and ensure that no-one ends up flying alone if they are uncomfortable doing so. For student safety reasons, students can only access the calendar once they receive an invite from the LPC director.

For tourism, we created a Google map pinpointing various tourist locations in London, which we obtained from the survey and from interviews. This map incorporates the most common locations that student survey respondents recommended visiting, including museums,

restaurants, and pubs, alongside the Acorn offices and a few common sponsors (Figure 8). We did not include housing locations on the map for safety reasons, and also were careful not to include too many sponsors, as we do not want students to select a project based on sponsor/project location instead of project topic. Based on student preference, all of this information was provided on the website in writing.

Fun Activities in London

Below you'll find a map of some fun locations in London, including restaurants, museums and more! All of the locations come recommended from past students who have attended the London Project Center.
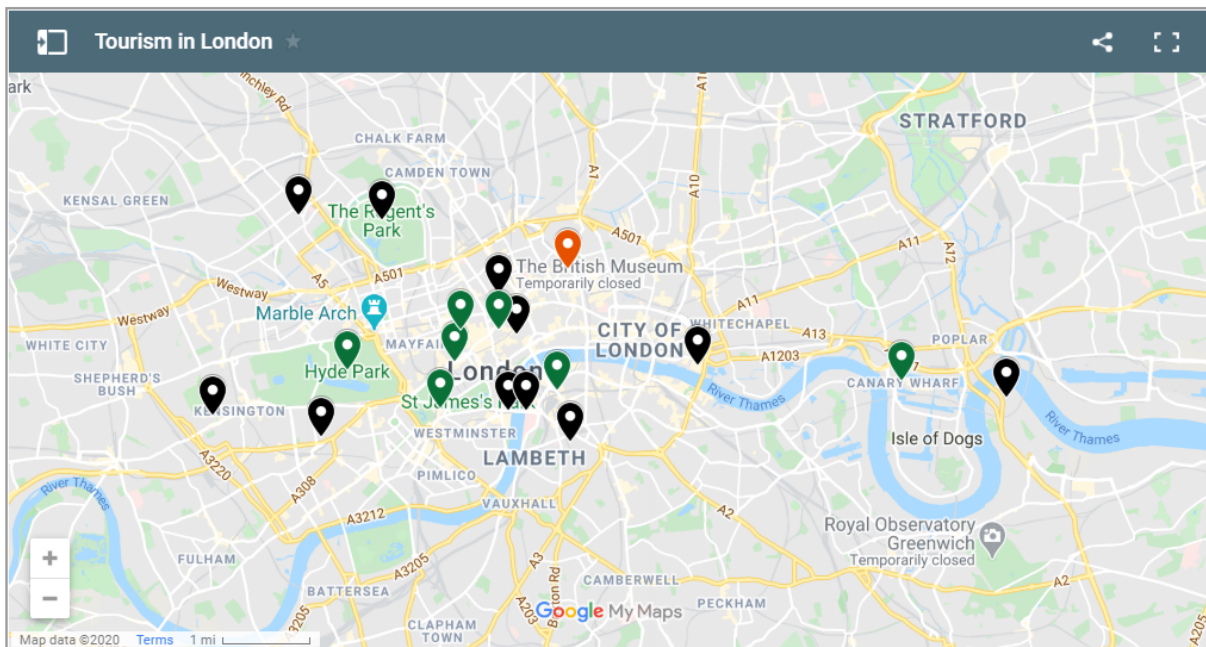
Figure 8. Interactive map of various tourist locations in London.

2.3 Information on the London Project Center

For information on the London project center specifically, respondents indicated that ID2050, PQP, and other students were the most effective resources. Once again, the course catalog and academic advisors were not used by many of the respondents. For the LPC website, respondents were split between never used, "not effective" and "somewhat effective." Less than ten percent of respondents labelled the website as being "very effective." The effectiveness of IGSD staff was split between never being used and being "somewhat effective" (Figure 9).
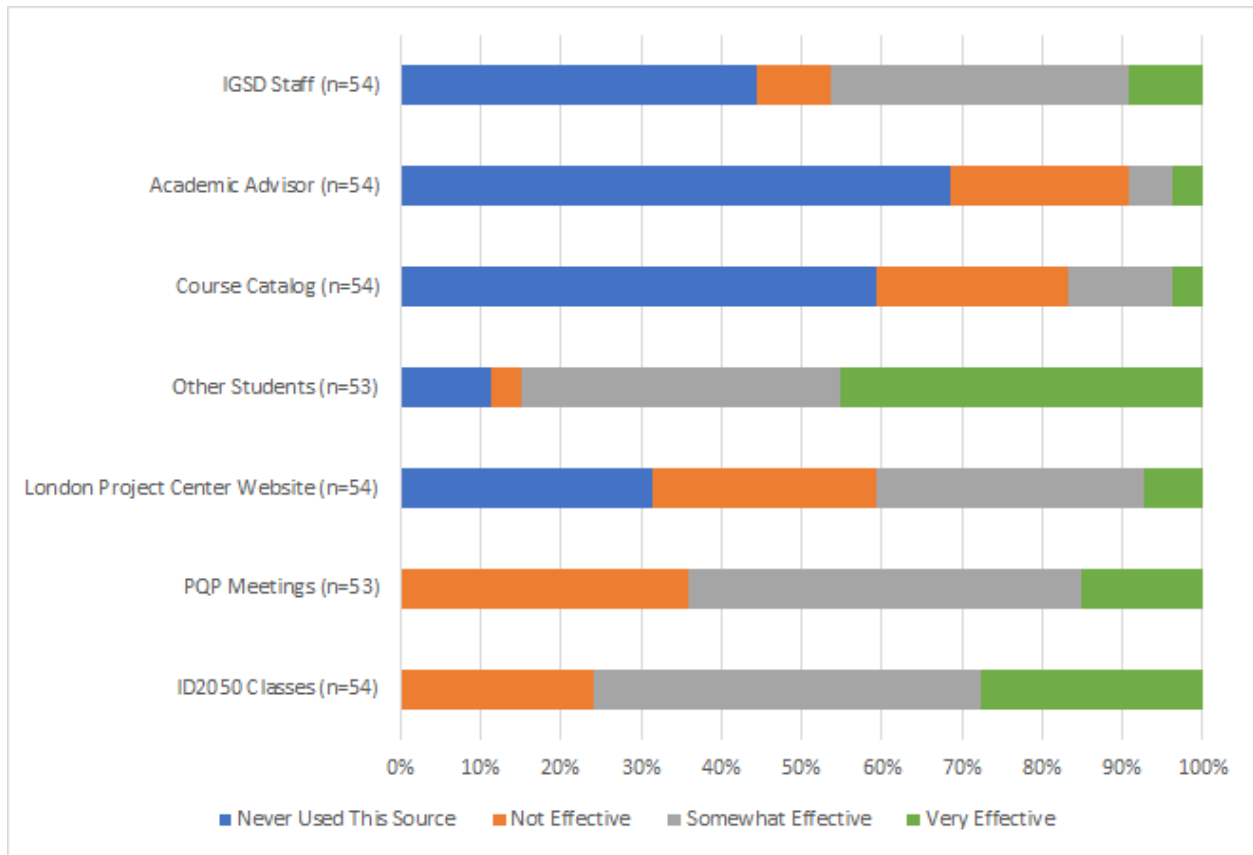
Figure 9. Effectiveness of resources for information on the LPC after acceptance.

Once again, the results for the eProjects site video may be skewed due to the fact that not every respondent had that resource when they were applying for their IQP. Figure 10 shows the effectiveness of eProjects for information on the LPC after acceptance. The data is sorted by the academic term the respondent went abroad, for only the past three terms, since we knew eProjects was available for these groups. The site video proved to be effective for all terms it was used with the exception of C-term 2020 (Figure 10).
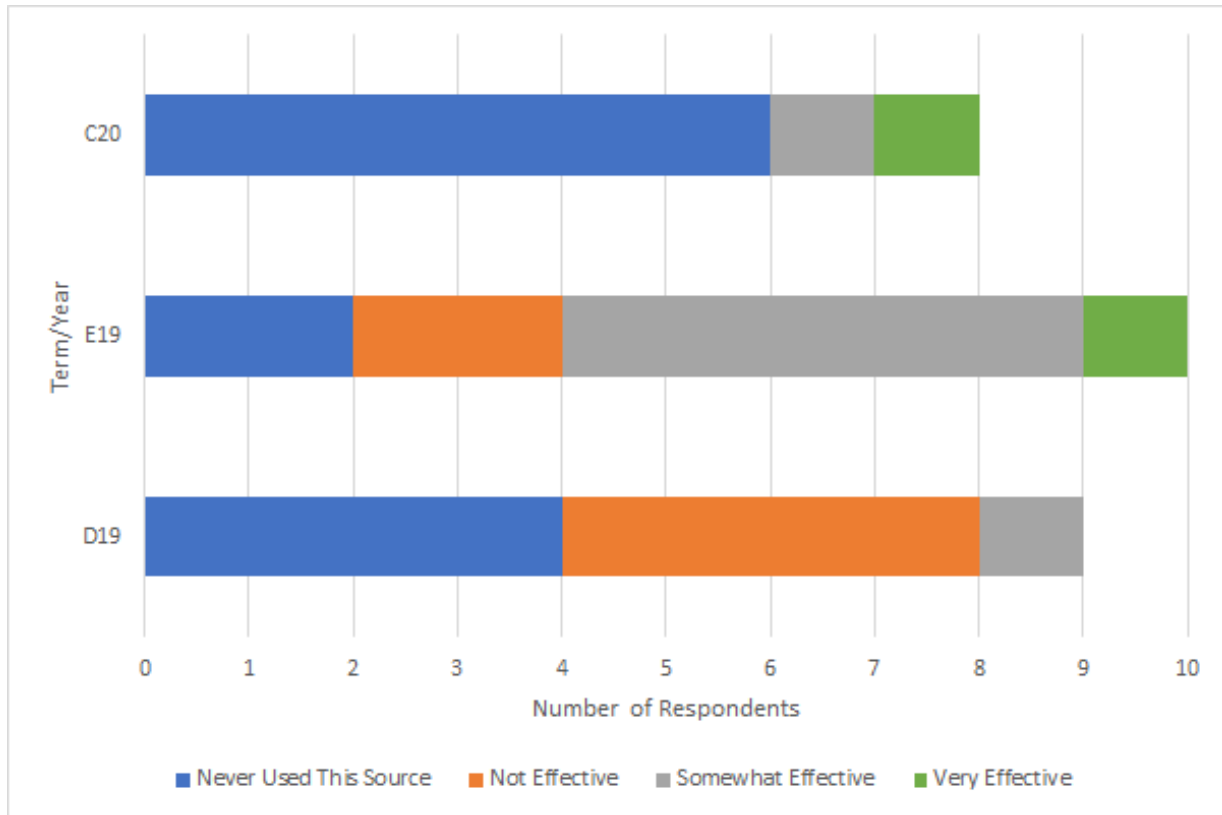
Figure 10. Effectiveness of eProjects site video for information on the LPC by academic term.

Figure 11 shows that, after being accepted into the LPC, respondents felt they received sufficient information on requirements for site preparation, ID2050 / PQP requirements and schedule, logistical project details, financial information, public transit and health and safety. The sufficiency of information on local cuisine, leisure activities, phones and housing leaned towards being too little. Even after being accepted into the LPC, more than half the respondents indicated that they would have liked more about finding and booking flights (Figure 11).
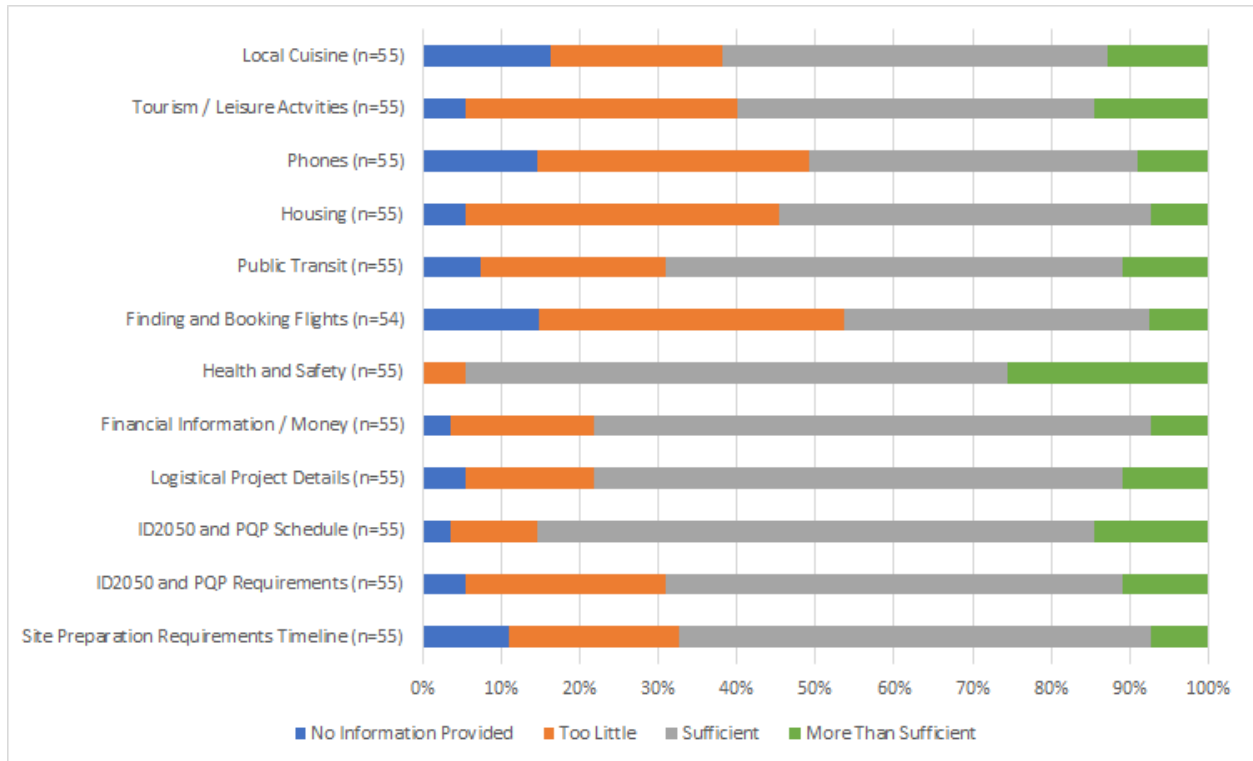
Figure 11. Sufficiency of information provided after acceptance into the LPC.

Our interviewees emphasized similar points as the survey respondents. All the interviewees generally felt prepared for London. Topics such as public transportation, general financial information and health information were considered to be useful. However, information on areas such as SIM cards for phones, public transportation, and directions to pick up housing keys could be improved.

With regards to how information on London should be provided, our interviews further reinforced the conclusions we had previously drawn from the surveys. According to Figure 12, students preferred writing, slideshows and printable PDFs to videos, although short videos were preferable to longer ones.

Figure 12. Preferred form of information on the LPC.

We designed the website to fill the information gaps identified in the surveys and interviews. Some of these areas, such as phones and flights, were highlighted as problematic areas during the application process, making them important to both students applyin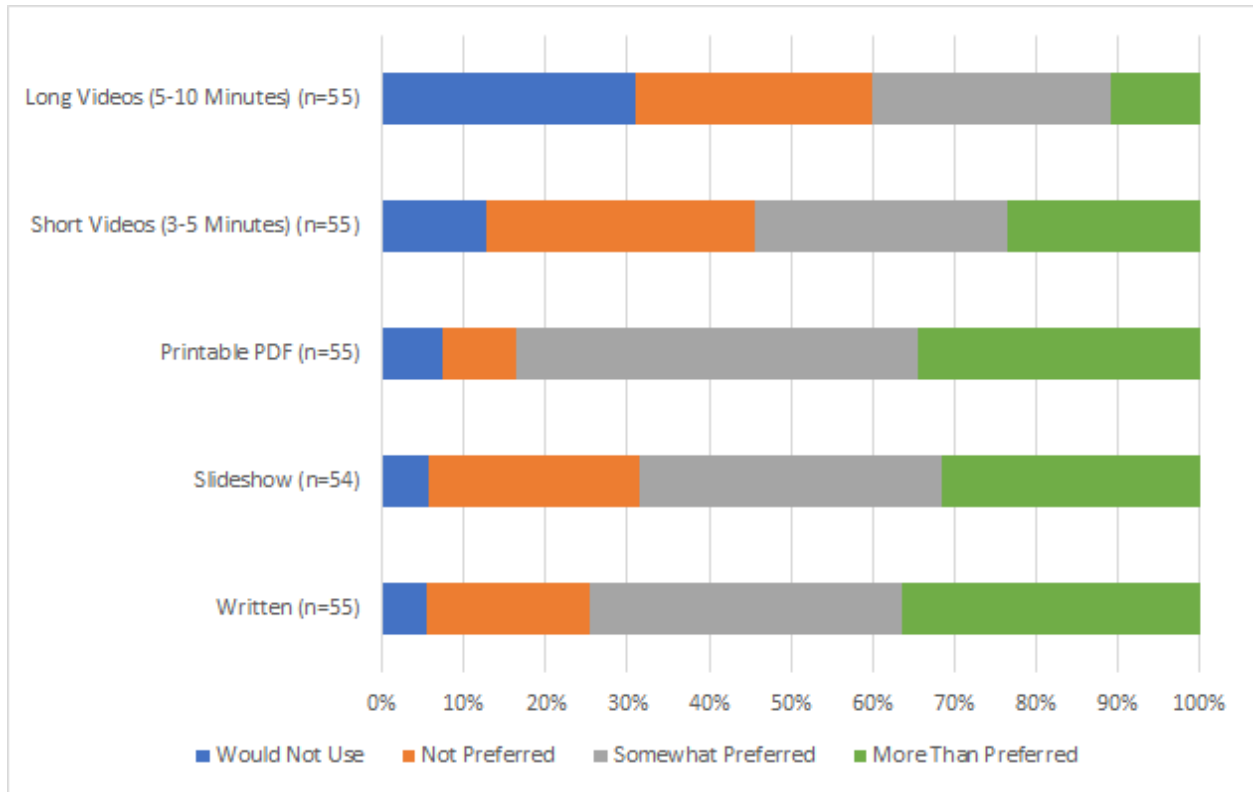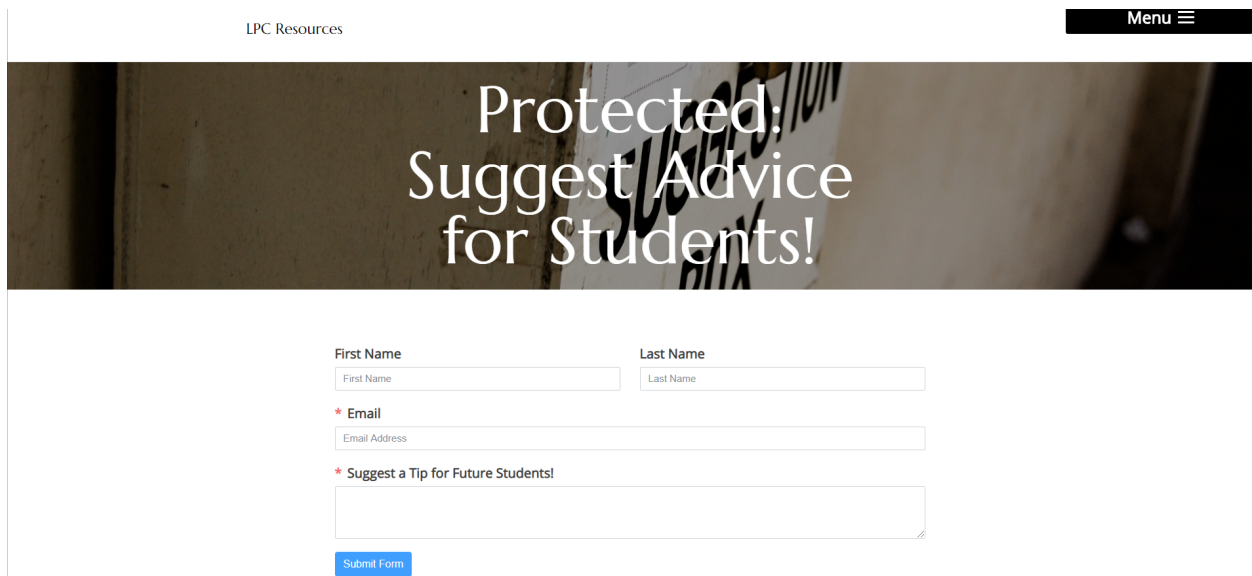g for IQP, as well as those already accepted into the LPC. In addition to those topics, we also created a page on local cuisine, which details the variety of foods and dining options available to students. A housing page provides information about the housing company as well as some pictures of what the apartments look like. Under finances, we created an "Expected Costs" page to help students estimate how expensive the trip will be. We also included a map that contains the route from Heathrow and Gatwick airports to the housing company's office, where students can pick up the key to their apartment. The location of the apartments themselves will not be disclosed on the website for the safety of the students.

Since other students were considered to be such an effective resource, we added a section to our student resources called "Advice from Past Students," highlighting tips and tricks on how to manage an IQP and get the most out of the experience. The form to submit feedback is password protected so only past LPC students can submit advice (Figure 13). In our student

interviews, we found that students' experiences with sponsors differed significantly depending on the sponsor, ranging from extremely positive to mixed. The defining factor of this dynamic was the amount of communication between the students and sponsor, with all interviewees stating that working more closely with their sponsor would improve their project overall. Communication between students was equally valuable, with interviewees claiming that good team communication was the key to better team dynamics. Success of the project was likewise tied to communication.

Figure 13. Advice from past students on the LPC resources website.

To provide longevity to the website and its resources, we included fields for past students to submit their own material to specific pages on the site. Students can post advice based on their experiences with the LPC, and submit locations of restaurants and activities to be added to the site under the maps (Figures 14 & 15). The center director can then add those suggestions to the site maps if they choose. Posting material on the site requires a password, which will be provided by the site director on request from the students. This will provide a way for past students to relay personal experiences, advice, and recommendations.

Below is a list of other recommended locations in and around London to visit during your trip. If you are an LPC student and have recommendations you would like to make, go to Suggest a Location page under Accepted Student Content.

Suggestion
Stonehenge
Dover
Edinburgh Castle
Highgate Cemetery
Hyde Park
London Eye
Sky Garden

Search

Figure 14. Suggested tourist locations on the "Tourism and Leisure Activities" page.

Figure 15. "Make a Suggestion!" page for past students of the LPC to submit suggestions.

3. Sponsor Resources

To find what content would be most beneficial to organizations considering sponsoring a project with the LPC, we conducted five interviews with previous project sponsors.[1] The interviews were designed to gauge the sponsors' experiences with the LPC, and find what features they would want in a revised LPC website. Interview questions were kept constant between interviews, although the introduction was altered according to each sponsor. The sponsor interviews indicated that the current LPC website and additional resources did not suffice in depicting what WPI is and what sponsoring an IQP involves.

All the sponsors we spoke with had positive experiences working with WPI students, regardless of whether or not they had worked with students from other colleges as a comparison. We found that the objective of the projects and how they were conducted varied by sponsor, with elements like surveying and data collection being the most common aspects they looked to get out of IQPs. While sponsors generally felt well informed on the function of an IQP, there were some topics that the LPC website could clarify. Providing a background on WPI's project-based learning gives sponsors a better picture of the students that will be working with them and what their capabilities are. As sponsors want student groups to function well independently, being more informed about the WPI Plan's focus on collaborative problem-solving will give them confidence in their IQP team's abilities.

We found that the sponsors had generally good experiences working with the LPC, often holding WPI students above other student programs they worked with in the past. However, our interviewees did have some suggestions as to how the experience of working with the LPC could be improved. What sponsors are looking for is quick, concise, easily digestible information, not extreme amounts of detail. Short written segments with pictures are more desirable, with downloadable PDFs containing more extensive information for the sponsor's future reading and reference. This downloadable material could contain more extensive information on the WPI Plan and program, past IQPs, and content already present in the London Project Center Student Placements information packet. Most sponsors we interviewed said they would not read through more than a page of material when initially looking at a website. Additionally, one sponsor we

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[1] The term *sponsor* refers to the organization that is working with a student IQP team. In the UK, the term *sponsor* carries a financial connotation. Therefore, we use the term "Project Host" on the website.

spoke with said that there was not a sufficient way for prospective sponsors to view previous projects despite every past LPC project being available to view on the website: it is too cluttered and difficult to navigate.

Taking this into account, we modified our storyboards to fit sponsor content onto a single page on the website, divided up by topic. As displayed in Figure 16, we created five separate topics that sponsors can click on, at which point, a small amount of information appears. This allows sponsors to get some basic information about the LPC in a fast, easy-to-understand manner. If they are interested in hosting a project and desire further information, they can contact the center director with the information provided on the "Contact Us" tab (Figure 16). Due to the nature in which project information is stored in the LPC website, we were unable to prioritize creating an efficient method for displaying information on past projects.

Figure 16. "Sponsor Resources" page on the LPC resources website, with an integrated slider to divide specific topics.

Conclusions and Recommendations

The process of finding, researching, and applying for IQP can be stressful, especially if information is hard to find. Similarly, discerning what to expect from an IQP can be difficult for an organization without pre-existing connections. To address both of these problems, we evaluated the needs of both students and sponsors through surveys and interviews. We consulted with IGSD staff for more information on the IQP application process itself, and for guidance on what information to and to not include. We also surveyed past students and sponsors to find out what they were looking to get from online resources. We found that:

- Short text-based segments are preferable to longer-form media.
- Students are most interested in more information about travel, logistics, and finances.
- Sponsors want a short executive summary-style description of WPI and the IQP.
- Most sponsors learn about the program through personal connections and the Center Director.

Using the knowledge we gained, we prototyped and created a website to be used in parallel to the current LPC website. By providing resources both for students and sponsors in an easily accessible and easy to read format, we will facilitate greater engagement of both students and sponsors with the GPP.

Also expressed was a desire for more chances to connect with students and faculty, to better set up future projects and gain a better understanding of WPI's capabilities. Multiple interviewees expressed that word-of-mouth was the best method for other organizations to learn about and become interested in sponsoring projects with WPI. While not related to the website and online resources, sponsors also expressed interest in more face-to-face events during IQP terms, allowing them to meet other student teams and sponsors to expand their own networks. Creating networking events, such as an in-London project presentation day where representatives from all sponsoring organizations can see not only the results of their project, but also the five or six other projects done by the other teams, would give an opportunity to show the range and flexibility of WPI students. These events should also be available through a video call or recorded and accessible online in order to reach those that are not able to travel to the event location.

Additionally, implementing networking features on the LPC website in the future will give organizations the tools necessary to reach out and contact past sponsors and learn about their experiences with WPI firsthand. Additional tools geared toward localizing the information on the application process, as we have done on our own application process timeline, would also benefit students. By focusing future efforts on networking and communication, more opportunities for sponsors to find student teams and for students to do interesting projects will naturally emerge. Testimonials would also be useful for these reasons, although we were unable to gather any as the online interviews proved unsuited for direct quotation. Asking previous sponsors directly for testimonials in the future would improve the website.

Due to the nature of how project information is stored in the current LPC website, we were unable to present information on past LPC projects in a more engaging way. Therefore, we recommend that the LPC research ways to reformat the organization of information about past projects, with the feature to filter projects by general topic area and sponsoring organization. This would help prospective sponsors learn about the type of work the LPC does, as well as whether or not their organization would be a good fit.

References

Lune, H. & Berg, B.L. (2017). A dramaturgical look at interviewing. In *Qualitative research methods for the social sciences* (pp. 65 - 93). Pearson Education Limited.

Sutton, H. (2016). Follow 5 steps to create elegant and accessible web design. *Tools of the Trade, 8*. doi: https://doi.org/10.1002/tsr.30257

New York University. (n.d.). *Undergraduate semester or academic year away*. Retrieved from https://www.nyu.edu/academics/studying-abroad/upperclassmen-semester-academic-year-study-away.html

Schachterle, L. & Watkins, M. (1992). The WPl interactive qualifying project - a model for British engineering education? Engineering Science & Education Journal, 1(1), 49-56. 10.1049/esej:19920010

Worcester Polytechnic Institute. (n.d.). *Contact Us*. London Project Center - Worcester Polytechnic Institute. Retrieved March 31, 2020, from https://wp.wpi.edu/london/contact-us/

Worcester Polytechnic Institute. (n.d.). *Creating the WPI Plan*. Retrieved from https://www.wpi.edu/about/wpi-history/wpi-plan

Worcester Polytechnic Institute. (n.d.). *For Project Hosts*. London Project Center - Worcester Polytechnic Institute. Retrieved March 31, 2020, from https://wp.wpi.edu/london/for-sponsors/

Worcester Polytechnic Institute. (n.d.). *For Students*. London Project Center - Worcester

    Polytechnic Institute. Retrieved March 31, 2020, from https://wp.wpi.edu/london/for-

    students/

Worcester Polytechnic Institute. (n.d.). *Global Projects Program*. Retrieved from

    https://www.wpi.edu/project-based-learning/global-project-program

Worcester Polytechnic Institute. (n.d.). *Home page*. London Project Center - Worcester

    Polytechnic Institute. Retrieved from https://wp.wpi.edu/london/

Worcester Polytechnic Institute. (n.d.). *How to Apply*. Retrieved from

    https://www.wpi.edu/student-experience/resources/off-campus-projects/how-to-apply

Worcester Polytechnic Institute. (n.d.). *A Miracle at Worcester: The Story of The WPI Plan (Part*

    1). Retrieved from https://www.wpi.edu/content/miracle-worcester-story-wpi-plan-part-1

Worcester Polytechnic Institute. (n.d.). *Projects*. London Project Center - Worcester Polytechnic

    Institute. Retrieved from https://wp.wpi.edu/london/projects/

Worcester Polytechnic Institute. (n.d.). *Washington, D.C.* Washington, D.C. Project Center.

    Retrieved from https://wp.wpi.edu/washingtondc/about/washington-d-c/

Worcester Polytechnic Institute. (n.d.). *The WPI Plan*. Retrieved from

    https://www.wpi.edu/project-based-learning/wpi-plan

Worcester Polytechnic Institute. (n.d.). *WPI Program*. London Project Center - Worcester

    Polytechnic Institute. Retrieved from https://wp.wpi.edu/london/wpi-program

Wu, J. & Brown, J.F. (2016). Website Redesign: A Case Study. *Medical Reference Services Quarterly, 35*(2), 158-174. doi:10.1080/02763869.2016.1152142

Appendix A: IGSD Interview Questions

We are a team of Worcester Polytechnic Institute students working with Dominic Golding. Our team will focus on improving the online resources provided by the London Project Center (LPC) and we would like to invite you to participate in a video or phone call session to discuss your involvement with the Global Projects Program and the IQP. Your identity will not be associated with any of your responses, unless you state otherwise, and your images will function only as an educational resource. Our team may scale, crop, or enhance your image, but will not alter the image in any other ways. We will contact you if your name will be associated with any of your responses or media content, and you will have the opportunity to review the final product. You may ask a member of our team at any time to review or withdraw your images or interview responses. Your participation is completely voluntary. Thank you for your time.

I hereby consent to the collection and use of my personal images via photography or video recording.
I acknowledge these may appear on the IQP Project Center website, in newsletters and publications as well as distributed to members.
I understand that no personal information, such as names, will appear in any publications unless I give express written consent.
I acknowledge that the members of the IQP team may scale, crop, or enhance images or recordings of myself and others, but they will not alter the images or recordings in any other way.
I also understand that I may withdraw this consent anytime, upon written notice to the members of the LPC project group.

If you have any questions about the interview, please email us at gr-lond20-lpc@wpi.edu.

Before the interview, we will confirm with you if these terms are acceptable.

1. IQP Applicant qualifications:
    a. Regarding the application process, what do you look for in an applicant?

     b.   Do you look for different qualities in applicants based on each project center?

2.   Assigning Project Centers:

     a.   What are the basic guidelines for assigning project centers to students?

3.   Dates and timeline:

     a.   How close to the deadline do students usually begin the application process?

     b.   How do you currently notify students of upcoming submission deadlines?

     c.   What happens when students miss submission deadlines?

4.   Common IQP application process questions:

     a.   Do you often find that students have difficulty navigating the application process?

         i.   What questions do you typically receive from students during the application process?

5.   Global Projects Program (GPP):

     a.   How successful do you think the GPP has been at achieving the following:

         i.   Providing information on project centers

         ii.   Providing information about the application process

     b.   How can the GPP improve at the following:

         i.   Providing information on project centers

         ii.   Providing information about the application process

         iii.   Do you have any suggestions on improving any of the topics above? Mention these information outlets:

             1.   Website

             2.   Email

             3.   Catalog

     c.   Do you think the e-projects website provides enough information about each project center?

6.   Resources / Available Material:

     a.   Hidden/helpful resources:

         i.   Do you know what resources students tend to gravitate toward the most?

         ii.   What resources do you think are underutilized by students during the application process?

     b.   Information gathering/improvements on e-projects website:

        i.   Do you think there is any information/resources missing on the e-projects website that would be useful to students?

7. Recommendations for our web development:
   a. Are there any recommended or required features for a project center website?
   b. Are there any features that have not been tested on a project center website before?
   c. Do you have any examples of well-created project center websites that we could potentially model our website off of?
   d. Do you have any recommendations of what not to do on a project center website?

Appendix B: Student Survey Questions

Thank you for participating in this survey for our research project. We are an IQP group working to improve the online resources provided by the London Project Center (LPC). The purpose of this survey is to learn more about your experiences with the LPC. Your feedback will be used to inform the creation of online resources for a new LPC website. We will be asking you some Likert scale questions as well as some short answer questions. The topics of these questions will be on the application process of an off-campus IQP, pre-departure preparation, your experience working on an off-campus IQP project, and daily life in London.

Your answers will remain anonymous. You will have the option of providing your email to sign up for a $25 Amazon gift card, but this email will be kept separate from your survey responses. The resulting data of the survey responses may be published in the final research paper and final iteration of our project.

Participation in the survey is voluntary, and you can skip any questions you do not wish to answer. The survey will take approximately 10 minutes. Please complete the survey by April 14, 2020.

If you have any pictures you would like to send during your time on IQP in London, we would appreciate it! By submitting your pictures here, you hereby consent to the media content being published to the final research paper and final iteration of our project. Please submit your pictures in a document including the term, year, and location of each.

If you have any questions about the survey, please email us, Chyla Alonte, Katherine Deyette, Elijah Levi and Joseph Swetz, at gr-lond20-lpc@wpi.edu.

1. What term/year did you go to London on IQP?
    a. D16
    b. E16
    c. D17

d. E17

   e. D18

   f. E18

   g. D19

   h. E19

   i. C20

2. How effective were the following resources for gathering information **for selecting a project site**? (Never Used This Source, Not Effective, Somewhat Effective, Very Effective)?

   a. WPI E-projects - Site Videos

   b. Project Center Websites

   c. Global Fair

   d. Other Students

   e. Course Catalog

   f. Academic Advisor

   g. IGSD Staff

3. Please list any other resources, if any, you used for gathering information for **selecting a project site**.

4. How effective were the following resources for gathering information **about the London project site after you were accepted**? (Never Used This Source, Not Effective, Somewhat Effective, Very Effective)?

   a. ID2050 Classes

   b. PQP Meetings

   c. WPI E-projects - London Site Video

   d. London Project Center Website

   e. Other Students

   f. Course Catalog

   g. Academic Advisor

   h. IGSD Staff

5. Please list any other resources, if any, you used for gathering information **about the London project site** after you were accepted.

6. **During the application process**, how much information was provided on the following topics (No Information Provided, Too Little, Sufficient, More Than Sufficient)?
   a. Application Process Timeline
   b. Logistical Project Details (i.e. Site Arrival / Departure Dates, Onsite Travel, etc.)
   c. Financial Information / Money (i.e. Budgeting, Currency, Payment Methods, etc.)
   d. Health and Safety
   e. Finding and Booking Flights
   f. Public Transit
   g. Housing
   h. Phones
   i. Tourism / Leisure Activities
   j. Local Cuisine

7. Please list any other topics you would have liked information on **during the application process**.

8. **After being accepted into your project site**, how much information was provided on the following topics (No Information Provided, Too Little, Sufficient, More Than Sufficient)?
   a. Site Preparation Requirements Timeline
   b. ID2050 and PQP Requirements
   c. ID2050 and PQP Schedule
   d. Logistical Project Details (i.e. Site Arrival / Departure Dates, Onsite Travel, etc.)
   e. Financial Information / Money (i.e. Budgeting, Currency, Payment Methods, etc.)
   f. Health and Safety
   g. Finding and Booking Flights
   h. Public Transit
   i. Housing
   j. Phones
   k. Tourism / Leisure Activities
   l. Local Cuisine

9. Based on the previous question, please list any topics you would have liked information on **after being accepted into your project site**.

10. How would you have preferred information about the IQP **application process** be presented to you? (Would Not Use, Not Preferred, Somewhat Preferred, Highly Preferred)
    a. Written
    b. Slideshow
    c. Printable PDF
    d. Short Videos (3-5 Minutes)
    e. Long Videos (5-10 Minutes)
11. Please list any other ways in which you have liked information about the IQP **application process** to be presented to you.
12. How would you have preferred information about your IQP **project center** be presented to you? (Would Not Use, Not Preferred, Somewhat Preferred, Highly Preferred)
    a. Written
    b. Slideshow
    c. Printable PDF
    d. Short Videos (3-5 Minutes)
    e. Long Videos (5-10 Minutes)
13. Please list any other ways in which you have liked information about your IQP **project center** to be presented to you.
14. Please list your sponsor liaison and your sponsoring organization:
15. How would you describe your experience working with your sponsor?
16. How did you typically get to your sponsor? Please select all that apply:
    a. Tube
    b. Bus
    c. Cab / Taxi
    d. Uber / Ride share program
    e. Walking
    f. Other: _____
17. Please list your 3 favorite places to visit in and/or around London for entertainment (i.e. museums, theaters, etc.):
    a. Place 1: _____

b. Place 2: _____

c. Place 3 _____

18. Please list your 3 favorite places to eat in and/or around London:

a. Place 1: _____

b. Place 2: _____

c. Place 3 _____

19. Please list your 3 favorite places to walk to in and/or around London:

a. Place 1: _____

b. Place 2: _____

c. Place 3 _____

20. Thinking back to your time in London, what do you wish you had known more about in advance?

21. Is there anything else you would like to tell us that may improve the London experience for future students?

The survey then redirects to a separate Qualtrics survey to separate the email from the survey responses.

22. Thank you for taking the survey! Please enter your email here to enter into the raffle for a $25 gift card. This email will be kept separately from your survey responses and will be used solely for the purpose of the raffle.

23. If you would be open to participating in a short interview regarding the LPC website and possibly be featured on the website, please enter your name and email below. We will contact you via email soon to schedule an interview via Zoom. Once again, your name and email are being collected separately from the survey. They will not be associated with your survey responses and will be used only to arrange a follow-up interview if you are willing.

a. Name: _____

b. Email: _____

Appendix C: Student Interview Questions

We are a team of Worcester Polytechnic Institute students working with Dominic Golding. Our team will focus on improving the online resources provided by the London Project Center (LPC) and we would like to invite you to participate in a video or phone call session to discuss your experience working on IQP at the London Project Center (LPC). Your identity will not be associated with any of your responses, unless you state otherwise, and your images will function only as an educational resource. Our team may scale, crop, or enhance your image, but will not alter the image in any other ways. Direct quotes from the interview may also be included in the final research paper and final iteration of our project. We will contact you if your name will be associated with any of your responses or media content, and you will have the opportunity to review the final product. You may ask a member of our team at any time to review or withdraw your images or interview responses. Your participation is completely voluntary. Thank you for your time.

I hereby consent to the collection and use of my personal images via photography or video recording.

I acknowledge these may appear on the IQP Project Center website, in newsletters and publications as well as distributed to members.

I understand that no personal information, such as names, will appear in any publications unless I give express written consent.

I acknowledge that the members of the IQP team may scale, crop, or enhance images or recordings of myself and others, but they will not alter the images or recordings in any other way.

I also understand that I may withdraw this consent anytime, upon written notice to the members of the LPC project group.

If you have any questions about the interview, please email us at gr-lond20-lpc@wpi.edu.

Before the interview, we will confirm with you if these terms are acceptable.

Part 1: Video/phone sessions will be Zoom interviews.

1. What drew you to the London Project Center (LPC)?
    a. Were there any particular highlights of your IQP in London?
2. Sponsor relations:
    a. Who was your sponsor?
    b. How would you summarize your experience with your sponsor?
    c. How was your experience commuting to and from the sponsor's office every day?
3. Team member relations:
    a. How would you summarize your experience with your team members?
    b. How much time did you spend with your team members when not working, as opposed to the other students at your project center?
4. Academic experience with project:
    a. How would you summarize your experience with your project?
    b. What particularly went well with the project?
    c. What could have gone better with the project?
    d. Do you think your project positively impacted your sponsor?
5. Transportation in London:
    a. How did you get to London?
        i. What airline(s)?
        ii. How much did you pay?
    b. What form of transportation did you use most often?
    c. What were some positive experiences you had with transportation?
    d. What were some negative experiences you had with transportation?
    e. Did you buy an Oyster card? How did you go about purchasing one?
6. Local cuisine in London:
    a. What were some positive experiences you had with local cuisine?
    b. What were some negative experiences you had with local cuisine?
7. Foreign Transactions/Banking:
    a. How did you handle making foreign transactions with your bank while abroad (i.e. debit card, credit card, Apple Pay, Google Pay, cash, etc.)?

8. Phone in London:

   a. Did you buy a burner phone in London or buy an international SIM card?

      i. Why did you make this decision?

   b. What type of phone plan did you get and did it meet your needs?

9. Living Conditions in London:

   a. What did you like about the living arrangements?

   b. What did you find difficult about the living arrangements?

   c. Any highlights you experienced while living in London-style apartments?

   d. Did you experience homesickness at any time?

      i. What advice would you give based on your experience to combat this?

10. Leisure time in London:

    a. What did you do for fun during the weekday evenings after work?

    b. What did you do for fun during the weekends?

    c. Did you travel outside of London before or during IQP?

       i. Where?

11. Are there any other specific events or experiences that stood out to you in London? If so, what are they?

12. Do you feel as though you were well informed about the LPC before your IQP? (Scale of 1-5: 1 being not informed at all and 5 being well-informed)

    a. What information was specifically helpful?

    b. What information would you have liked to have access to before participating in a project, but did not have access to?

Part 2: If interested in giving feedback on the current LPC website and our website content ideas.

13. Show them the current website, if unfamiliar with the current resource layout.

    a. Is there anything you like about the current website?

    b. Is there anything you do not like about the current website?

14. What do you think about the content provided in the student content storyboard for the new LPC website?

a. Is there anything you like about the current storyboard?

b. Is there anything you do not like about the current storyboard?

    i.   Any suggestions?

Appendix D: Sponsor Interview Questions

We are a team of Worcester Polytechnic Institute students working with Dominic Golding. Our team will focus on improving the online resources provided by the London Project Center (LPC) and we would like to invite you to participate in a video or phone call session to discuss your experience sponsoring an IQP at the London Project Center (LPC). Your identity will not be associated with any of your responses, unless you state otherwise, and your images will function only as an educational resource. Our team may scale, crop, or enhance your image, but will not alter the image in any other ways. We will contact you if your name will be associated with any of your responses or media content, and you will have the opportunity to review the final product. You may ask a member of our team at any time to review or withdraw your images or interview responses. Your participation is completely voluntary. Thank you for your time.

I hereby consent to the collection and use of my personal images via photography or video recording.

I acknowledge these may appear on the IQP Project Center website, in newsletters and publications as well as distributed to members.

I understand that no personal information, such as names, will appear in any publications unless I give express written consent.

I acknowledge that the members of the IQP team may scale, crop, or enhance images or recordings of myself and others, but they will not alter the images or recordings in any other way.

I also understand that I may withdraw this consent anytime, upon written notice to the members of the LPC project group.

If you have any questions about the interview, please email us at gr-lond20-lpc@wpi.edu.

Before the interview, we will confirm with you if these terms are acceptable.

Part 1: Video/phone sessions will be Zoom interviews.

Summary of Sponsor for Interview:

- Information about the sponsor will go here and help us direct the questions that would be the most beneficial to understanding how a new sponsor would be feeling.
- Previous projects they've sponsored
- The year they started sponsoring WPI IQPs

1. Partnership with WPI:
    a. Do you remember how you first became involved in the program?
        i. What about working with WPI interested you?
        ii. Did you have any concerns about working with WPI students?
            1. What were they?
            2. What has your experience working with student groups been since then?

2. Impact of student project on sponsor:
    a. How has the WPI IQP program helped your organization?
    b. Any highlights from previous projects you would like to share?
        i. What did you find rewarding about working with student groups?

3. Time commitment/communication:
    a. How many hours do you spend a week working on the project when student groups are in the US?
    b. How many hours do you spend a week working on the project when student groups are in London?
    c. How difficult was it to get in contact with WPI student groups?

4. How would you summarize your experience with the WPI IQP program?
    a. What did you like about working with the program?
    b. What improvements do you think could be made to the program?
        i. Is there anything Dominic should be doing differently to better support you and/or the students in developing and executing the project?
    c. Have you worked with other international programs before?
        i. If so, how does WPI's efforts compare?

5. Information gathering and advice for prospective sponsors:
    a. What do you think would be the most effective ways to recruit new project hosts?

      b. Do you feel as though you were well informed about the WPI IQP program before sponsoring?

          i. What specifically was helpful?

      c. What resources do you think would be most useful to prospective sponsors?

      d. What would you say to some of your colleagues at [sponsor] or elsewhere who might consider hosting a student team?

Part 2: If interested in giving feedback on the current LPC website and our website content ideas.

6. Show them the current website, if unfamiliar with the current resource layout.

      a. Is there anything you like about the current website?

      b. Is there anything you do not like about the current website?

7. What do you think about the content provided in the student content storyboard for the new LPC website?

      a. Is there anything you like about the current storyboard?

      b. Is there anything you do not like about the current storyboard?

Any suggestions?

Appendix E: Student Content Storyboard

Website Student Content Storyboard
New Materials Outline

IQP Application Process and Relevant Dates

The LPC website would now localize the IQP application process and revelant dates relating to completing the application, specifically for the LPC. Content for the application process and IGSD preparation requirements would be given in the form of a flow chart or timeline. Visa information will be given and/or refer to IGSD for most up to date info.

LPC Details and Sponsored Projects

The LPC website would provide details about past projects in a more interactive manner (organized by reocurring sponsors from student survey). Project work in London will be described based on interviews with past LPC students and sponsors. (No map?)

Health and Safety

International SOS is the international health insurance for off-campus IQP students. A tutorial on how students can set up the associated app on their phone would be provided. Information on the local atmosphere and the "do's and don't's" of London would be provided. Different cell phone providers would also be listed for consistent communication.

Flights, Housing and Public Transit

An outline of how to book flights and travel to/from the airport to housing accommodations, as well as tips for travelling, will be provided. An interactive calendar will be provided to encourage students to schedule flights together. Pictures of the housing accommodations, as well as a link to the Acorn website, will be provided. The different options of public transit, **as well as locations of sponsors**, would be highlighted on an interactive map. We will also inform the students of useful phone applications for navigating the city and its public transit system. Details will also be provided on international travel while in London, although these details may be subject to change because of Brexit.

Financial Information and Money

Call bank/encourage pre-planning. Banks that are partnered with American banks would be listed, to reduce the number of foreign transaction fees. Tips on things that might help students on their day-to-day life and their cost would be incorporated through a chart. For example, a cost prediction for students working for the Commonside projects would be listed. Phone provider and Oyster Card costs/predictions would also be listed. We will also tell students about services such as Apple Pay, Google Pay, and Venmo to reduce the need for paying with cash.

Life in London and Tourism Activites

Popular activities stated from previous students would be included through multiple formats (short slideshows and pictures). An interactive map highlighting recommended locations incorporating student pictures and videos would also be included. **Apps for cheap food will be given ("Too Good to Go").** We will also list common culture differences such as the washing machine and common London slang

Appendix F: Sponsor Content Storyboard

Website Sponsor Content Storyboard
New Materials Outline

What is WPI and the LPC?

Worcester Polytechnic Insitute (WPI) is an engineering and science-focused university with a unique emphasis on project-based learning. WPI students work in teams to complete extensive practical projects, including a capstone in humanities, an interdisciplinary, international hands-on project, and a major-specific technical project.

An Interactive Qualifying Project (IQP) is an integral part of the WPI curriculum, where undergraduate students have the opportunity to perform interdisciplinary work in teams. They work together to solve a problem or address a blend of scientific, technologic, and societal needs in communities.

An IQP is about the intersection of technology and society. Each project must involve the students interacting with society in some way (i.e. surveys, interviews, etc.). The project is not free labor, but rather an opportunity for students to complete a project that may be helpiful to an organization.

Describe the two terms, ID2050 and IQP
Describe student placement into IQP

https://www.wpi.edu/academics/undergraduate/interactive-qualifying-project

What can an IQP do for me?

WPI students are experienced and motivated project workers. IQPs support their sponsoring organization by conducting data collection, analysis, and content creation. IQP is informational for both the student and the sponsor. Your organization will be positively impacted by the efforst of WPI students.

Common questions:
- cost
- equipment
- time commitment - see "Responsibilities as a Sponsor"

[link to past successful projects here]
Sponsor and student testimonials go here
Successful projects showcased

What to expect when working with students

Student Placements into Projects
Students rank their interest in individual projects, and list relevent skills and work experience. They are then assigned to the project that most fits their interests and skills, along with 3-4 other students. These teams work together not just in London, but also for the academic term prior to plan their project and coordinate with you, the sponsor.

Age
Students participating in the IQP are typically 20-21 years old, and in their third year of undergraduate studies. Say "undergraduates" instead of student

Student Background
Students come from a variety of academic backgrounds. Every student, regardless of their major, must complete an IQP to graduate. Emphasize "project managers" title

Responsibilities as a Sponsor

The project begins in the term prior to when the students arrive in London. During the first 7-week term, the sponsor has weekly phone/video meetings with the student team to discuss the project. During this time, the students will create a project proposal, including a project background and methodology, which they will send to you once complete.

In the second term the students will work on-site in London for 40 hours a week. At this time the students will work on-site with the sponosr to execute the methodology that was outlined in the proposal. The sponsor must still meet with the student team directly when needed to make sure the project is going as planned.

Sponsors usually spend the first week of the term with initial introductions and preparing students with preliminary information . After that, both the students and sponsors will determine what is appropriate to maintain good communication, usually meaning a weekly, one-hour video meeting.

Once students are on site, the time commitment for sponsors can be reassessed, usually including a one-hour weekly progress meeting and any additonal required meetings to answer student questions . Toward the end of the onsite work, studenst will have the majority of their proposal finished and will independently finish writing their final proposals.

Contact Us

To become a sponsor, contact us at [address here].

[Dominic's email here]