

# Connecting College Campuses to the Worcester Community

An Interactive Qualifying Project submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the degree of Bachelor of Science.

By

Nathan Lipka

Kleo Golemi

Nelson Diaz

Di Abdimash

Date:

25 April 2023

Report Submitted to:

Jeanine B. Went, Ph.D.

Higher Education Consortium of Central Massachusetts

Prof. Laura Roberts & Prof. Michael Elmes

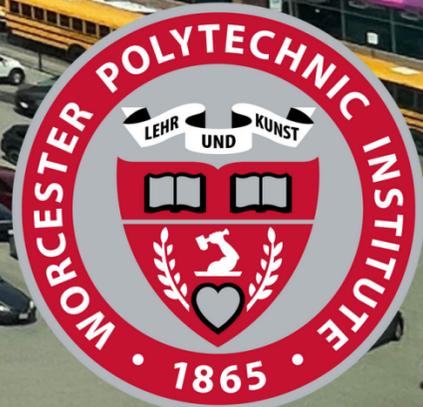
Worcester Polytechnic Institute

This report represents work of WPI undergraduate students submitted to the faculty as evidence of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review.

For more information about the projects program at WPI, see <http://www.wpi.edu/Academics/Projects>.

# CONNECTING COLLEGE CAMPUSES TO THE WORCESTER COMMUNITY

BREAKING DOWN  
THE BARRIER  
BETWEEN  
COLLEGE AND  
COMMUNITY



## Abstract

To better integrate colleges into their local communities, we interviewed various representatives of the Worcester public to determine their opinions regarding colleges. From there, we developed a shared event calendar where colleges and universities can post their events which are open to the public, to make it easier for anyone interested to see them all in one place. A shared calendar facilitates communication between the universities and the local community and thus kick-starts a prosperous town-and-gown relationship within Worcester. In this report, we provided an automated prototype, a resilient long-term solution involving Discover Central MA, and recommendations for colleges and universities to follow to optimize community engagement and create a strong town-and-gown relationship.

## Executive Summary

Town-and-gown refers to the relationship between universities and colleges in relation with the local community. A Town-and-gown relationship creates economic development, educational opportunities, and community service and development.

Colleges and universities create jobs, as well as bring new people into the city, whether they are students, visitors, or staff and faculty. Due to this, more money is circulated within the economy, into local businesses and other services which help develop the area economically. The University of Pennsylvania (UPenn) in Philadelphia, has released reports on the university's economic and social impact on Philadelphia and Pennsylvania. In the fiscal year of 2015, UPenn was calculated to have an economic impact of \$14.3 billion and \$10.8 billion for the Pennsylvania and Philadelphia economy respectively (UPenn., 2016).

Colleges and universities also provide educational opportunities for the community. There are many 'College in High School' programs that the local community can take advantage of. A 'College in High School' program allows current high school students to take college courses for a discounted price or free of cost. The state of Massachusetts follows this model with the "Commonwealth Dual Enrollment Partnership", but they can also be provided privately by colleges. An example is Worcester Polytechnic Institute (WPI) allowing Massachusetts Academy of Math and Science (Mass Academy) seniors to take courses at WPI for no cost.

Lastly, colleges and universities also provide a lot of community service and community development through the numerous student and college organizations that exist to give back to the community. The Student Leader Fellowship Program (SLFP) at Northern Michigan University in Marquette, is a program where college students go into the community with their assigned mentor and provide their services. Due to these reasons, it is important to work toward a stronger town-and-gown relationship for Worcester.

With the sponsorship of The Higher Education Consortium of Central Massachusetts (HECCMA), we investigated the benefits of a strong town-and-gown relationship that creates economic development, educational opportunities, and community service, and provided a solution.

We research Social Web, Discover Central MA, and the HECCMA event calendar due to the feasibility of cooperation with each organization to help develop our event calendar. Social Web is an event calendar from the early 2000s. It allowed for any registered user to post events onto the calendar for everyone to see. The events posted have required fields such as day, time, description, and location. We looked into Discover Central MA, an event calendar designed for the use of central Massachusetts with a more modern UI and active user base. Discover Central MA provided the same fields as Social Web, with the addition of a thumbnail of the event. Lastly, we looked into the HECCMA events page. The HECCMA event page shared the same fields for event inputs as the previous event calendars, as well as the ability to display the events in a list form, week form, or traditional calendar form.

We interviewed city councilors, colleges, and community group representatives to learn what events the Worcester community is interested in, as well as how the colleges currently interact with the community. We began by interviewing four of the city councilors. We focused our questions on two major topics, the current town-and-gown relations in Worcester and what community groups exist in Worcester that they thought we should contact. As elected representatives, it is the councilors' job to understand the needs of the Worcester residents and know what major groups exist within the city.

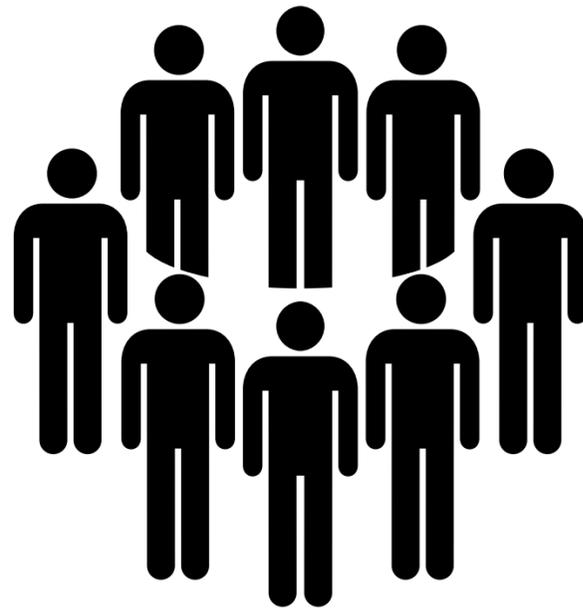
After interviewing the city councilors, we used the information we gathered to refine our questions and determine which community groups to contact. When interviewing community groups, we focused our questions on how they receive information about local events and what events they would be most interested in attending on college campuses. This information was compiled in our findings and used to make recommendations for the colleges regarding the best ways they could try to connect to the Worcester community. Community groups like the ones we interviewed also play the role of representing the Worcester population in a more targeted and active way compared to the city council. These groups are there to serve the needs of the community and are made up of community members themselves. For these reasons, they serve as reliable sources of information about the desires of their subset of the Worcester population.



Finally, we made sure to interview HECCMA member institutions. These are the colleges and universities that will be holding the events that we are interested in, so it is important to hear their thoughts on our project. Our questions for these institutions were focused on what events they currently offer to the general public and what ways they currently advertise those events. This information was used to create our short-term prototype and long-term plan for connecting the Worcester community to the colleges.

We coded and processed the information gathered from interviewing the city councilors, colleges, and community group representatives and created a short-term solution, a long-term solution, and recommendations for the colleges and universities as well as Discover Central MA. Our short-term solution is a prototype calendar hosted on HECCMA's website. This prototype automates the process of extracting event data from multiple educational institutions and posting them to the HECCMA website. It is designed to fetch event information from the College of the Holy Cross, Worcester Polytechnic Institute (WPI), Clark University, Tufts University, and services from the Massachusetts College of Pharmacy and Health Sciences (MCPHS).

For the long term, we recommend integrating all HECCMA universities into the Discover Central MA calendar, a well-recognized platform that offers various features beneficial to both universities and the general public. This integration would simplify event promotion and registration, provide promotional and marketing services, and offer valuable insights for improved event planning catering to Worcester residents' needs.



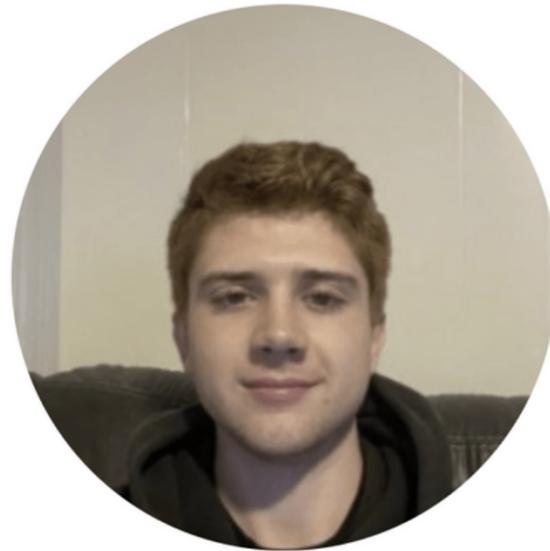
**Table 1: Community Event Interests**

<b>Interested Events</b>	<b># of Results</b>
Open Gym/Gym Events	3
Sports	2
Speaking Events	2
Arts & Crafts	1
Workshops	1
Karaoke	1
Movies	1
Open Library	1
Block Party	1



# Authorship

When outlining our paper, we split each major section into multiple subsections and those subsections were distributed evenly among the group to write our first draft. Upon completion of our first draft, the group would come together to review the draft as a whole. After, we would all review the comments and implement them again within a group setting. Once we received feedback from the advisors, we would again come together in a group to determine how we would distribute the remaining revisions. After those revisions were complete we would come back together as a group once more to review it one final time.



**NATHAN LIPKA**

Class of 2024  
Mechanical Engineering Major  
nflipka@wpi.edu



**NELSON DIAZ**

Class of 2024  
Computer Science Major  
nacruz2@wpi.edu



**KLEO GOLEMI**

Class of 2024  
Electronic & Computer  
Engineering Major  
kgolemi@wpi.edu



**DI ABDIMASH**

Class of 2023  
Aerospace Engineering Major  
dabdimash@wpi.edu



# Acknowledgements

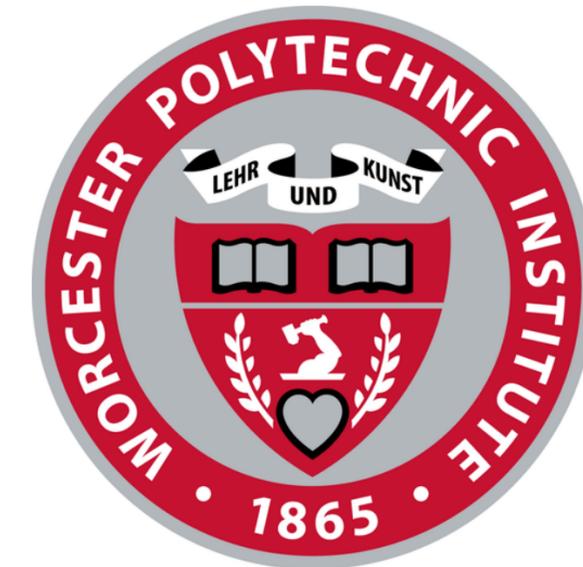
Thank you to everyone who helped us through this project by letting us interview them or by providing us with contacts to various people. Without them, this project would not be possible. Additionally, we would like to thank some especially notable people who helped us with our project.

We would like to thank the Worcester city council for being willing to speak with us about the project. The council members were able to provide us insight into the current relations between the colleges and the Worcester community, as well as contacts to community groups throughout Worcester.

Next, we would like to thank Timothy Power, the Membership Success Coordinator at Discover Central MA, who was willing to be our main contact at the company and answer any questions we had. With his help, we were able to create a future plan for colleges to integrate into Discover Central MA.

Importantly, we would like to thank Jeanine Went, the Executive Director at HECCMA, for sponsoring this project and providing us with contacts to the colleges. With her help, we were able to refine the goal of our project and create a viable final product.

Finally, we would like to thank our advisors, Laura Roberts and Michael Elmes, for supporting us throughout this project and for reviewing our report. Their assistance allowed us to complete this project without many setbacks.



# Table of Contents

Introduction	1	Results & Analysis	11
Background	2	Introduction	11
The Benefits of a Healthy Town-Gown Relationship	2	Worcester Is Composed of Many Community Groups	
1. Economic Development	2	That Represent Its Population	11
2. Educational Opportunities	3	Engaging Events Are Popular Throughout The Community	12
3. Community Service and Community Development	5	No Single Event Distribution Method Is Superior	13
Our Project	6	Not Every College Is Interested In Bringing The Community	
Methodology	7	On Campus	14
Introduction	7	Colleges Offer a Wide Variety of Events and Services	14
1. Investigate Public Experience	7	Colleges Primarily Use Calendars, Social Media, and Email	
1.1 Interviewing City Councilors &		to Inform The Community Of Events	14
Community Groups	7	Event Information Is Disaggregated Across Many Calendars	15
2. Contact Colleges	8	Deliverables	16
3. The Final Product	9	Prototype Design	16
3.1 Creating a Prototype	9	Recommendations	17
3.2 Creating a Long-term Plan	9	Conclusion	18
Informed Consent Process	10	References	19
		Apendicies	20

# List of Figures

Figure 1: Economic breakdown of Pennsylvania and Philadelphia	3
Figure 2: Percentage of students enrolled in college by level based on their 8th-grade post-secondary plan	4
Figure 3: Social Web Event Page	6
Figure 4: Discover Central MA Event Page	6
Figure 5: HECCMA Event Calendar	6
Figure 6: College Events Offered	13
Figure 7: Means of Event Distribution	13
Figure 8: Prototype Calendar	15

---

# List of Tables

Table 1: BGSU'S ECONOMIC IMPACT ON OHIO	2
Table 2: Mentions of Community Groups	10
Table 3: Community Event Interests	11
Table 4: QCC Gym Membership Prices	11
Table 5: Common Sources for Event Information	12
Table 6: List of Event Calendars	14

# Introduction

Worcester is a city in the heart of Massachusetts and the second-largest city in New England. It contains 11 colleges and universities, with each having its own community made up of students and faculty. However, many of these college communities are not well integrated into the larger Worcester community. Many residents of Worcester view these campuses as private locations where they are not welcome, which can be reinforced by the lack of communication between universities and the communities they are a part of. This lack of communication is highlighted by the number of events colleges host that are open to the public but are commonly not known by those who are not related to the college.

The goal of our project was to inform the Worcester community about all the public events hosted by the Worcester colleges through a shared event calendar. With the help of our project sponsor, The Higher Education Consortium of Central Massachusetts (HECCMA), a consortium of 11 Central Massachusetts colleges, we were able to contact different colleges along with various members of the Worcester community to understand how the colleges interact with the community and how to improve this communication. From this information, we made a prototype event calendar on the HECCMA website, as well as future recommendations for the colleges.

In the background chapter, we investigate the benefits of a town-and-gown relationship, as well as a few event calendar websites that we considered while making our prototype. In the methodology chapter, we describe our approach to investigating the public experience, contacting colleges about their events and cooperation in the project, and execution of the final product. The results chapter consists of our findings from our interviews as well as a discussion on the prototype. Lastly, we provide recommendations to the universities and interested parties to optimize community involvement.



# Background

## Introduction

Colleges are fantastic places to grow and develop as a person on top of obtaining an education. Campuses within a city specifically can provide facilities and services which can be beneficial to the community as well as the students. Colleges have an important role to play in building stronger connections with their communities, as many residents view campuses as private property that they are prohibited from entering (Haar, 2011). This can create a sense of exclusion and contribute to negative attitudes toward higher education. The use of public events on these campuses can help break down these barriers and strengthen the connection between colleges and their communities. The term for the relationship between colleges and the city is called a 'town-and-gown' relationship. As Harr notes, "Public events on campus can bring together town-and-gown, encouraging a new sense of shared ownership of the urban landscape" (Haar, 2011, p.113). By promoting greater engagement with the community, colleges can help build a more positive public image, create a community where people can grow and learn, as well as make higher education seem like a place where everyone belongs. Strong town-and-gown communities are linked with economic development, educational opportunities, community service.



## The Benefits of a Healthy Town-Gown Relationship

### 1. Economic Development

The primary process of how colleges and universities induce economic development is through college-related expenditures. College-related expenditures are categorized into capital improvements, operating expenditures, employee spending, student spending, and visitor spending (Carroll & Smith, 2006). These expenditures add cash flow that would otherwise not be there. The cash flow induced by consumer spending goes into local businesses, which are the backbone of a local economy. This is especially true in the instances where universities are bringing in students and professionals from external cities since they have effectively introduced new consumers into the market. In this section, we will take a further look into instances where colleges have positively benefited the local economy.

In 2006 a report was published regarding the economic impact of Bowling Green State University (BGSU), and it found universities can both directly and indirectly stimulate the local economy. The university directly spent 179.4 million dollars on employee payrolls and other expenses. In this process, 5,472 jobs were created. They range from professors and staff to business-to-business jobs that were generated from town-and-gown activities. In addition to these direct benefits, the money supplied by the university is then primarily spent in the local economy such as businesses and services that are not directly connected to the university benefit (Carroll & Smith, 2006). This is only one avenue through which BGSU influences its local economy, but there is also spending from students and visitors. BGSU's economic impact is summarized in Table 1.

**Table 1. BGSU'S ECONOMIC IMPACT ON OHIO (Millions of dollars)**

Expenditure	Direct	Indirect	Induced	Total
University Spending	\$179.4	\$52.7	\$89.9	\$321.9
Employee Spending	120.7	24.3	22.6	167.6
Student Spending	136.5	28.2	26.2	190.9
Visitor Spending	14.5	3.9	5.9	24.4
Total	\$451.1	\$109.2	\$144.6	\$704.9

(Florida, 2016)



The more students who attend a university, the more the local economy will benefit from having a larger amount of consumers, and similarly, a larger student population would also require more staff, directly helping the economy. There are cities in the United States which are student hubs such as Philadelphia or New York City which have a student population of 350,000 and 1,000,000 respectively (Florida, 2016). The University of Pennsylvania reports that they have injected nearly \$122 million into local businesses in West Philadelphia during the fiscal year 2015 through the inevitable interactions the students and faculty create with the community (UPenn, 2016). In Figure 1, the economic impact of the University of Pennsylvania is shown.

## 2. Educational Opportunities

The relationship between a college and its surrounding community is crucial, especially when it comes to education. Programs that connect K-12 students with local colleges can spark interest in higher education and lead to a more educated and prosperous community. In 2003, the State of Massachusetts granted \$643,000 to 11 of their community colleges. This grant was used to create readiness programs for local middle and high school students. The workshops assisted students who were unsure of what they were planning to do after high school, which included exposure to things such as trade programs. MCAS (Massachusetts Comprehensive Assessment System) prep classes were held to help students improve on the notably under-average scores for the state that year. Finally, they held college planning seminars to help both students and parents prepare for the arduous task that is touring, applying, deciding, and ultimately attending a college or university ("Community Colleges Receive Grants," 2003). The most important fact about these programs is that they were all held on campus. This was a fantastic way of giving students a taste of what it's like to be a part of college.

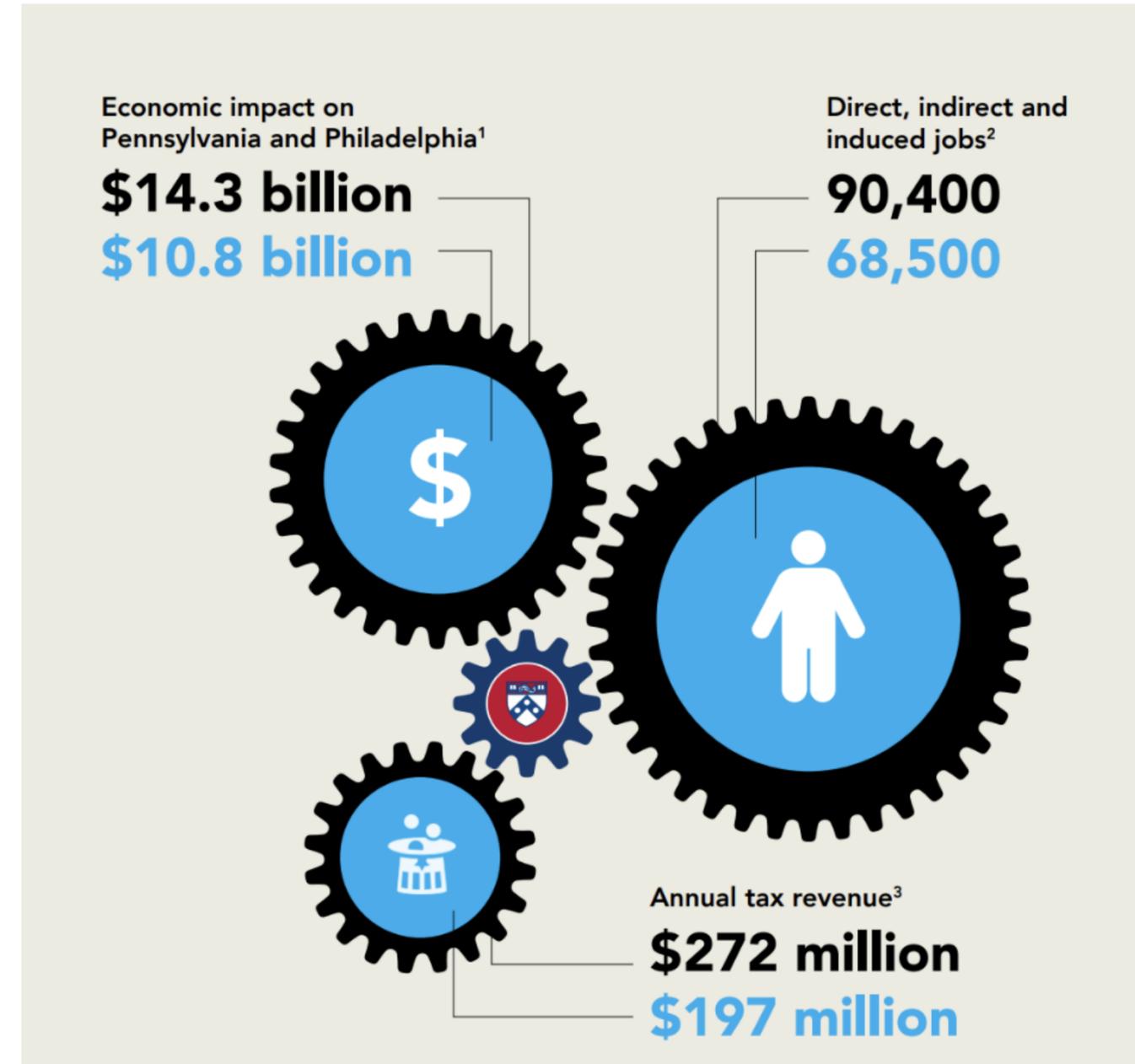
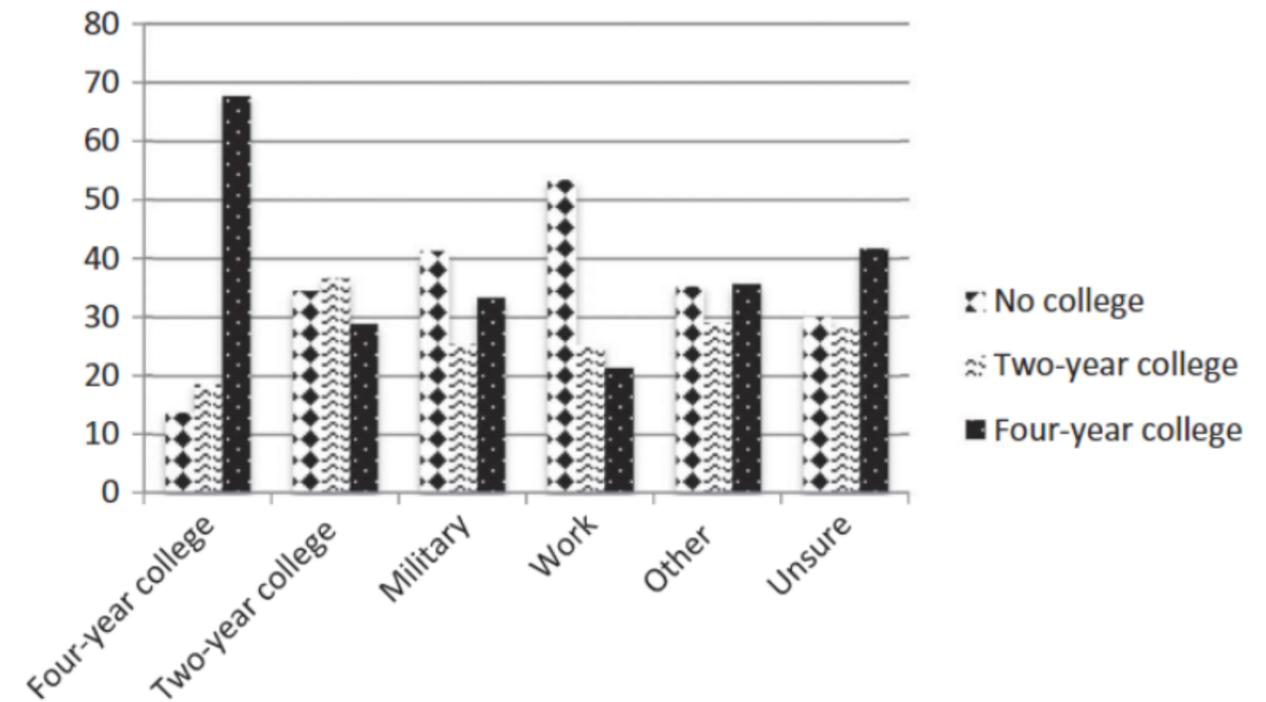


Figure 1: Economic breakdown of Pennsylvania and Philadelphia (UPenn, 2016)

Of course, one of the most important parts of an institution's relationship with its city is the education it can provide. A study published by Nathan B. Copeland, a doctorate graduate of the University of Alabama, found that "resident faculty members add a level of academic intellect to the community" (Copeland, 2020, p.99). The college brings in hundreds of students a year many of which are bound to stay in the city afterward. Bringing in an educated population allows the city to grow as a whole. In the study, Copeland found that in the case of the city of Opportunity, Magnolia University made a large difference in the lives of students, teachers, and administrators at Green Space Elementary with tutoring sessions, sports clinics, and parental programs. Green Space was previously ranked the lowest out of the Opportunity Public Schools System and is now in the middle of a complete 180 with help from Magnolia.

Colleges need to make connections with their surrounding community, as well as prospective college students. Reaching out to the K-12 students to spark interest in various aspects of college is a key step. It was found that students who plan to attend a 4-year college by their 8th-grade year are 24% more likely to follow through when compared to students who have not made any such plans (Britton, 2019). This is inherently beneficial to the community as those with a college degree tend to be more conscious, motivated, and empathic, have financial benefits, and have emotional stability due to the social environment and situations that are implicit within a college campus (Castro & Clyde, 2018). Thus, it is important for colleges to reach out to K-12 students, that way everyone has the opportunity for a more secure future.



**Figure 2:** Percentage of students enrolled in college by level based on their 8th-grade post-secondary plan (Britton, 2019)

The University of Pittsburgh has "College in High School" which is a program that partners with local high schools to offer courses that allow students to earn both high school and college credit. This program provides high school students with access to college classes, which also prepares students for college. The program benefits the University of Pittsburgh as well as members of the community, which creates stronger ties with the local community. This program serves as a pipeline for future undergraduate students. In addition to providing college courses, this program also provides financial benefits to the community by reducing the cost of college for students who complete the program and enroll at the University of Pittsburgh. The "College in High School" program shows the educational opportunities created by a positive town-and-gown relationship that are mutually beneficial to the community and colleges (About Us | College in High School, 2023).

Similar to the “College in High School” program offered by the University of Pittsburgh, Massachusetts offers a similar program statewide, where a high school student can enroll in a college-level course through the “Commonwealth Dual Enrollment Partnership” which provides high school students with college-level courses for free or a discounted price (Massachusetts Department of Higher Education, n.d.). This program has the same benefits shown in the College in High School program the University of Pittsburgh provides, but expands it to a statewide level. In addition to this, Worcester Polytechnic Institute (WPI) has the Great Minds/CoMPASS Scholars Program which is a scholarship program that fully covers tuition and fees for low-income, academically talented, first-generation students from Worcester Public Schools funded by the National Science Foundation (NSF) (WPI, 2022). Similarly, WPI has relations with the Massachusetts Academy of Math and Science at WPI, which is a public high school for 100 academically accelerated high school juniors and seniors. As seniors, enrolled students can take college courses at WPI, which prepares high school students for college, as well as provides a challenging and rewarding academic experience (Mass Academy, 2023). These programs exhibit educational opportunities which a strong town and gown relationship creates, which can lead to cultural enrichment and economic development.

### 3. Community Service and Community Development

Colleges and universities also give back to the community directly through community engagement and community service. Universities have a campus of young, creative, and eager students that have very little experience in the real world. Through community service or internships, students are able to provide their expertise and talents to the community, and in return will gain invaluable life and work experience.

Henry Cisneros, former Secretary of Housing and Urban Development, has stated that institutions bring intellectual and economic resources to their communities. Through many institutions tearing down the wall that separates the campus from the community, intellectual and other resources are added to the community (Bonsall et al., 2003). Communities benefit from the time, talent, energy, and enthusiasm that students bring to their respective communities through volunteer, working, interning, and service-learning initiatives. At the same time, student experiences in the community can be meaningful, enriching, and life-changing (Bruning et al., 2006). Students learn valuable real-world skills through their service to the community which cannot be learned inside the classroom.

The Student Leader Fellowship Program (SLFP) at Northern Michigan University in Marquette is an innovative leadership program dedicated to developing competent, ethical, and community-centered student leaders. SLFP was initiated in 1991 under the combined sponsorship of the W. K. Kellogg Foundation and Northern Michigan University. This is a two-year program where 50 students are chosen every year, and are assigned a mentor within the community that they shadow (Bonsall et al., 2003). The mentors are assigned on a skill similarity and applicability metric, thus making a good pairing. As stated in the previous sections, adding the talent and energy of a university student to a community is valuable to the communities development and culture, but it also benefits the student as it provides a mentor. A student of the SLFP, Anne Zanotti, who went through this program reported, “Having a mentor has been the most influential experience for me. My mentor is such a wonderful role model for me and I feel so lucky that she was my mentor. I was nervous at first to meet her, but we got along so well. She took me in as if I were one of her own. She has been a great asset in my college life, and I couldn’t have asked for a better mentor” (Bonsall et al., 2003).

Exposure to higher education can also be done through existing events that are held on college campuses. On-campus events are a large and important part of college life. Not only does it provide a way for students to unwind after a long day of classes, but it can also provide students with an additional form of learning and social interaction that would not be possible in a classroom setting. James Tuten, a history professor at Juniata College, has found that in addition to letting students enjoy themselves, on-campus events are able to grow and change a student’s previously held beliefs while also learning to appreciate new things (Tuten et al., 2015).

Coincidentally, there are also benefits for the colleges if local community members attend on-campus events. Stephen Bruning, a professor of communication at Capital College, has found that community members who have recently attended an on-campus event are more likely to have a positive outlook on the college (Bruning et al., 2006). Therefore, an increase in the attendance of on-campus events by members of the local community can provide an opportunity for colleges to eliminate the stigma of them being elitist or unapproachable. This change in attitude is a two-way positive relationship where the community benefits by gaining access to additional exclusive performances and lectures, while the college can gain increased attendance to paid events along with influence in the community. In addition to this, a college having a good reputation within its community also carries the possibility of it gaining a better reputation nationwide.

## Our Project

The Higher Education Consortium of Central Massachusetts (HECCMA) is an association of public and private accredited colleges and universities in central Massachusetts, which is looking to increase interactions between colleges and surrounding communities. HECCMA is committed to working collaboratively to further collaborate, connect, and convene parties of interest with member institutions (About Us – HECCMA, 2022). A goal of HECCMA is to create a welcoming and interactive relationship between the college and local communities to replicate the benefits and environment of larger, more influential cities.

Worcester has 11 colleges, and staying up to date on events across all of these universities takes a lot of time and may disincentive community members from staying up to date. Someone who wants to be up-to-date with local events would have to navigate the calendars and sub-calendars of 11 colleges. This amount of time and effort investment could lead to them not attending any on-campus events. A shared event calendar that collects all of these events into one website would make it easier for someone to keep up-to-date with local events.

We investigated the event calendars of the HECCMA, Discover Central MA, and Social Web since they are candidates for hosting the event calendar. While looking through all of these event calendars, it is important that the user interface is visually appealing. Visual displays typically have shown the most positive engagement in posts—measured by the number of user engagements the post received (Dhanesh, 2022). We live in an age of rapid media consumption. With rapid consumption only becoming faster as the years progress, companies have to adapt to the ever-changing ways and spread information and messages that capture the attention of the users, which has led them to more easily digestible visual advertisements. Statistical studies have shown that 91% of consumers now prefer visual content over traditional text-based media and that “visual content can make a noticeable impact on every major business goal — influencing website traffic, brand awareness, social media engagement, lead generation, and sales” (Dayan, 2018). The design must be simple, have contrasting colors, as well as an eye-capturing thumbnail to optimize user engagement.

An event calendar used by the Worcester community was hosted on socialweb.net, where the colleges of Worcester, as well as anyone who created an account, could post an event for others to see. The Social Web was created in 1997 and is still operational today. The website's interface is shown in Figure 3.

The last event calendar which we considered is the HECCMA event calendar. The HECCMA website has an event calendar in which the member colleges and associations can post their events. The event calendar is shown in Figure 5. It provides the title of the event, which can then transfer you to a page where there is a more in-depth look at the event information, such as description, location, fees, and target audience. Currently, the calendar is not populated with many events.

In the background chapter, we discussed the research topic and its importance based on previous studies. Now, in the methodology chapter, we will explain how we conducted our research, including the methods we used to collect and analyze data. By following a well-structured approach, we hope to obtain accurate and reliable results that will contribute to our understanding of the topic.



Figure 3: Social Web Event Page



Figure 5: HECCMA Event Calendar (Events For April | HECCMA, 2023)

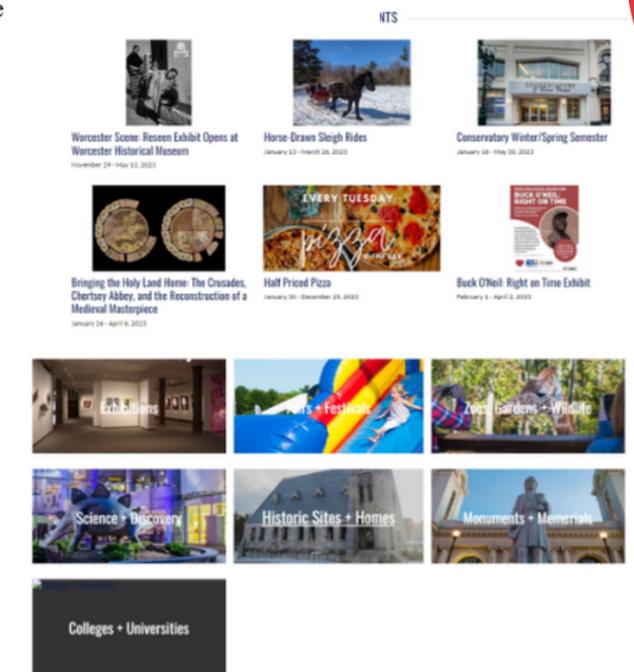


Figure 4: Discover Central MA Event Page (Events calendar—Discover Central Massachusetts, n.d.)



# Methodology

## Introduction

Our goal for this project was to explore potential solutions to integrate the Worcester public with its university campuses by fostering social connections and promoting community engagement through accessible and diverse academic, cultural, and recreational events. The first objective was to investigate the current social landscape and gather opinions from various stakeholders, such as Worcester residents, city councilors, and university representatives, to identify the most effective and inclusive solution that addresses the needs and interests of all parties. Next, we investigated the technical aspects of the event-sharing process by conducting in-depth archival research on the event calendars of colleges within the HECCMA network. This allowed us to identify best practices, understand commonalities and differences, and gain insights into user-friendly calendar features. In addition, we contacted campus representatives and interviewed them on how events are handled on their campuses in both the technical and human aspects. Using the information gathered from these objectives, we created our final product, which is a prototype calendar and a long-term plan of academic institutions integrating with Discover Central MA.

## 1. Investigate Public Experience

In order to determine the relationship between the Worcester public and Worcester colleges, we began by conducting semi-structured interviews with representatives from the Worcester City Council and Worcester community groups.

### 1.1 Interviewing City Councilors & Community Groups

We gathered qualitative data through semi-structured interviews with four city councilors. This approach was chosen because it allows for a deeper understanding of the perspectives and experiences of these crucial stakeholders, whose decisions have a direct impact on the community. Moreover, the interviews with city councilors facilitated the identification of community groups that could play a vital role in the shared calendar's implementation.

We employed a purposive sampling technique to select city councilors who represented various parts of the city, ensuring a wide range of viewpoints. The study's sample size was determined by the availability and willingness of city councilors to participate in the interviews. The interview protocol included open-ended questions that enabled participants to express their thoughts and experiences voluntarily. A full list of questions asked can be found in Appendix A.

Once the interviews were completed, we transcribed the recordings and prepared the data for analysis. We applied a thematic analysis approach, which entailed reviewing the transcripts, pinpointing patterns and themes, and assigning tags.

Building on the insights gained from city councilors, we moved forward with conducting interviews with various community groups throughout Worcester. Our primary objective was to learn about their experiences with local colleges and identify the types of events they would be interested in attending. Furthermore, we aimed to determine the most effective ways for colleges to engage with these communities when promoting events. We targeted community groups that city councilors mentioned as particularly important or referred to multiple times, such as the Boys and Girls Club and The Southeast Asian Coalition. Although we aimed to interview more community groups, we were only able to secure interviews with these two organizations. We conducted semi-structured interviews using open-ended questions (see Appendix B for a full list of questions). After completing the interviews, we took detailed notes and began organizing the collected data. We created separate files for each community group's responses, noting key points and observations. For instance, we looked at their preferred communication channels, event categories that interest them, and the frequency of their attendance at college events.

We then coded the data into major themes that emerged, focusing on themes related to town-gown relations, event accessibility, and community engagement.

The data analysis process helped us identify the following key details:

1. Preferred event types: We noted which event categories were most appealing to community groups, such as cultural events, academic talks, or sporting events.
2. Communication channels: We documented the most effective ways for colleges to reach out to community groups, including social media, email, and local newspapers.
3. Engagement opportunities: We took note of potential collaborative activities or programs that could enhance town-gown relations and foster stronger connections.
4. Accessibility and inclusivity: We gathered insights on how to make the shared calendar more inclusive and accessible for the community, such as by providing multilingual options or considering the diverse needs of different community groups.

These key details were chosen as they directly impact the development of a shared calendar tailored to the interests and needs of the Worcester community. By understanding the experiences and preferences of these community groups, we created a more inclusive and accessible calendar that strengthens connections between local colleges and the wider community.

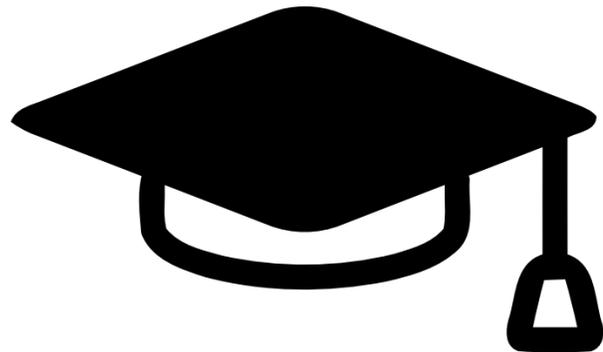
## 2. Contact Colleges

Our primary research focus was to determine how to collect and compile event data from various Worcester colleges to create a shared event calendar that is accessible to the Worcester public. We collected qualitative data through semi-structured interviews with student affairs and marketing department staff from the colleges within the HECCMA consortium. These members of the colleges were chosen since they have a deep understanding of college websites, event documentation, and promotion, which are fundamental components for creating a shared calendar.

A combination of online communication tools, primarily email and Zoom meetings, were used to facilitate these interviews. We targeted 11 institutions within the HECCMA consortium as our sample size. Unfortunately, we were able to reach out to only eight of them. However, our results include the largest and most influential institutions in terms of size, social impact, and location in the city.

We developed a series of interview questions (refer to Appendix C) that covered various aspects of event management and data accessibility. These questions helped us gather detailed information about each college's event management process, event calendars, types of events, public access to events, and the possibility of exporting data in a standardized format. During the interviews, we took notes to record participants' responses.

We began our data analysis by organizing the qualitative data into a document that categorized summaries of each response. We then conducted a thematic analysis to identify patterns, trends, and unusual insights. Quantitative data, such as the number of events or event categories, was also analyzed to gain a better understanding of each college's event management system and adjust the technical implementation of the calendar. We examined the similarities and differences among colleges, which helped us determine the feasibility and complexity of creating a shared calendar.



In order to collect the necessary information for our research, we conducted interviews with key representatives from a variety of colleges within the HECCMA consortium. These individuals were chosen based on their specific roles and responsibilities, which ensured they possessed the firsthand knowledge and experience with event management that we needed. Below is a list of the representatives we interviewed:

1. Holy Cross: The Interim Director of Government & Community Relations played a pivotal role in managing the college's relationships with external stakeholders and the local community.
2. MCPHS: The Senior Associate Dean of Students, the Associate Dean for the Forsyth School of Dental Hygiene, and the Associate Dean for Clinical Programs in the School of Optometry provided insights into various aspects of event management at MCPHS.
3. Clark University: The Associate Director of Community Engagement & Volunteering contributed to the university's community relations and event coordination efforts.
4. Quinsigamond Community College: The Vice President for External Affairs played a key role in managing the college's external relations and overseeing events that catered to the broader Worcester community.
5. Cummings School of Veterinary Medicine at Tufts University: The Director of Communications and Marketing was responsible for overseeing the communication strategies related to events at the veterinary school.
6. UMass Medical School: The Associate Vice Provost for Student Life, Director of Positive Learning, and Project Manager in the Office of Community and Government Relations provided valuable insights into event management and community engagement at UMass.
7. Worcester Polytechnic Institute (WPI): The Director of Community Relations was instrumental in coordinating WPI's relationships with the local community and managing various events. The Assistant Dean of Students Activities, Assistant Director of Student Activities, Marketing Communications, and Director of Marketing were also important figures, as they ensure the communication, successful organization, and promotion of events and initiatives that engaged both the campus and local communities.
8. Worcester State University (WSU): The involvement of the Assistant Director and Fitness Center Manager allowed to identify and create opportunities for collaboration, promote health and wellness initiatives, and manage events that promoted a strong connection between WSU and the surrounding area.

After conducting the interviews, we systematically organized the data by grouping responses according to the interview questions. We then created individual summaries for each institution's responses and compiled an Excel spreadsheet to mark key details needed for the analysis and working on the prototype. This spreadsheet included information such as

- 1.The number of on-campus events open to the public
- 2.Services offered by each institution
- 3.The possibility of extracting event information from their websites
- 4.Current agreements with Discover Central MA
- 5.Availability of sporting events for public access

This approach allowed us to effectively analyze and compare the information provided by the various representatives, thus gaining a comprehensive understanding of event management processes and data accessibility across the institutions. By consolidating this data, we were better equipped to identify potential challenges and opportunities for creating a shared event calendar.

### 3. The Final Product

The final product of our project is an event calendar that promotes community engagement and social connections between Worcester's public and its universities. The prototype calendar we created is a user-friendly and visually appealing platform that centralizes various events happening on Worcester campuses, including academic, cultural, and recreational events. Users can filter events by category, date, and location, making it easy for them to find events that align with their interests. The calendar is updated every hour to ensure that the events listed are accurate and up-to-date.

### 3.1 Creating a Prototype

Once we gathered the necessary information about the events, we created a prototype calendar on the HECCMA website. To accomplish this, we used web scraping techniques to collect event data from each college's website. Web scraping is a technique used to extract data from websites by automatically navigating and parsing their HTML content to retrieve the desired information. We utilized the data collected from the student affairs and marketing departments to identify the data points that we needed to scrape. The collected data include the event title, description, date and time, location, cost, and availability to the public. Next, we automated the process of uploading the scraped event data onto a HECCMA WordPress website. The prototype calendar we created serves as an effective short-term solution, allowing us to test the viability of our approach and identify potential technical issues and solutions.

### 3.2 Creating a Long-term Plan

While the prototype calendar serves as an effective short-term solution, we also recognize its weaknesses. In its current state, the prototype calendar would need to be maintained by HECCMA and is prone to break if any of the colleges update their websites significantly. To combat this, we began communications with Discover Central MA to create a more robust long-term plan for the colleges and HECCMA to adopt. The Discover Central MA calendar is a well-established platform that covers all of Central Massachusetts and offers various features, such as event promotion and marketing, event registration, and analytics, that can benefit both the universities and the public. By integrating with this platform, the universities can expand their reach and promote their events to a wider audience. Maintenance of the calendar would then be maintained by Discover Central MA and each college would be free to update its websites without anything breaking. Additionally, the public can access a more wide and diverse range of events happening in Central Massachusetts.

Overall, our approach aimed to encourage community engagement and promote social connections by creating a shared event calendar platform that is accessible and inclusive to all. By incorporating diverse perspectives and utilizing best practices, we created a user-friendly prototype calendar that can serve as a proof of concept for a more robust and constantly maintained solution. Connecting all HECCMA universities to the Discover Central MA calendar can provide a long-term solution that benefits both the universities and the public.



# Informed Consent Process

This project was reviewed by the WPI IRB for compliance. All participants were informed that their participation is anonymous and voluntary, as well as informed of the purpose of our project within our informed consent script.

## Informed Consent Preamble:

"Good (time of day), thank you for being willing to participate in a short interview for our research project. We are looking to get some information regarding interest in various college campus events in the area. Our research will be published and used to help make college campuses a more communal space for Worcester residents. The interview is entirely voluntary and anonymous, you are free to not participate, and you are free to stop at any time or skip any questions that you are not willing to answer. You will be able to contact us at any time via our email: [gr-heccma-d23@wpi.edu](mailto:gr-heccma-d23@wpi.edu). Finally, are there any questions that you have regarding either the interview or the project as a whole before we start?"

# Results & Analysis

## Introduction

In this section, we present the results of our research on the desires of the Worcester community, the current attitudes of colleges toward community engagement, and existing event calendar information. Our findings enabled us to understand the key aspects that community members and colleges prioritize, allowing us to identify opportunities for fostering stronger connections between these groups. By analyzing the community's preferences for events and colleges' existing offerings, we were able to determine the most effective ways to increase community engagement on campuses. Furthermore, our examination of existing calendars and event distribution methods revealed opportunities for improvement, leading to the development of a shared calendar platform prototype. Ultimately, our results and analysis provide the way for a long-term plan to improve community involvement and strengthen social connections within Worcester.

## Worcester Is Composed of Many Community Groups That Represent Its Population

The first step of our project was to investigate the public experience. To do this, we first reached out to the Worcester City and District Councilors. Throughout our interviews, we found several community groups that the Councilors felt represented Worcester as a whole. The most common ones were Friendly House, Centro las America, Boys & Girls Club, and the Latino Education Institute. During our interview with Councilor-at-Large Thu Nugey, we discovered that Worcester has one of the highest Vietnamese populations out of any city in the United States, so we felt it was very important to get in touch with the South East Asian Community as well.

**Table 2:** Councilor Mentions of Community Organizations

Community Groups	# of Results
Centro las America	2
Friendly House	2
Latino Education Institute	2
Boys & Girls Club	2
African Community Education	1
Brazilian Pastor	1
Ghanaian Community	1
South East Asian Community	1
Acentria	1
Dominican Community Cultural Group	1
Salvadorian	1
Islamic Center	1
Traditional Non-Profit World	1
Worcester Public Schools	1
Upward Bound	1
Worcester Senior Center	1
Canal District Business Alliance	1

### Engaging Events Are Popular Throughout The Community

A key point of our interviews with the various community groups was getting an idea of what events they would be interested in on campus. During our interviews, 3 of the interviewees expressed interest in access to campus athletic facilities via open gym hours. While we imagine this is a pretty far reach for colleges to just open their doors to everyone for free, it would be more reasonable for publicly funded institutions such as Quinsigamond Community College which offer reasonable pricing programs. Quinsigamond allows anyone to purchase a one-year membership to their facilities for \$100. On top of that, they offer a \$200/year family membership as well, allowing 2 adults and 2 children under the age of 17 to use the facilities at any time.

Amongst the community groups we interviewed, 2 of the interviewees expressed that their community would be interested in sporting events on campus. All the colleges we investigated allow the public into their sporting events, most at a small entry fee of \$5 (free for students and faculty), during our interview with a representative from Holy Cross they mentioned that for many of the events, there is no entry fee at all. Speaking events were just as popular as well, speakers can bring in a wide variety of people from different walks of life. There is no shortage of public speakers looking for a platform and these campuses can facilitate them.

One of the more educationally beneficial events that an interviewee was interested in was workshops, these would provide experience for K-12 students to get hands-on some real college learning. Giving K-12 students a taste of what it's like to attend a college will inevitably help them make the decision on whether or not they want to pursue higher education. At the end of the day, if a college is confident in its curriculum, it should be eager to share its tastes with the next generation of students. Up until February of this year, Worcester Polytechnic Institute held a large-scale event known as the Touch Tomorrow program, which engaged the community in various aspects of STEM through different mini workshop tables.

**Table 3: Community Event Interests**

Interested Events	# of Results
Open Gym/Gym Events	3
Sports	2
Speaking Events	2
Arts & Crafts	1
Workshops	1
Karaoke	1
Movies	1
Open Library	1
Block Party	1

**Table 4: QCC Gym Membership Prices**

Quinsigamond Community College Gym Memberships	Fee
QCC Employee/Retiree/Board Member/Student/and children under age 26	No Charge
Spouse of QCC Employee/Retiree/Board Member/Student	No Charge
QCC Registered Mentor	No Charge
QCC Alumni Yearly	\$50/yr
Individual/Community Member Yearly	\$100/yr
Family Year Membership Yearly	\$200/yr
Individual/Community Member Monthly	\$10/mo
Senior Yearly Membership (58+)	\$75/yr

(QCC, 2023)

## No Single Event Distribution Method Is Superior

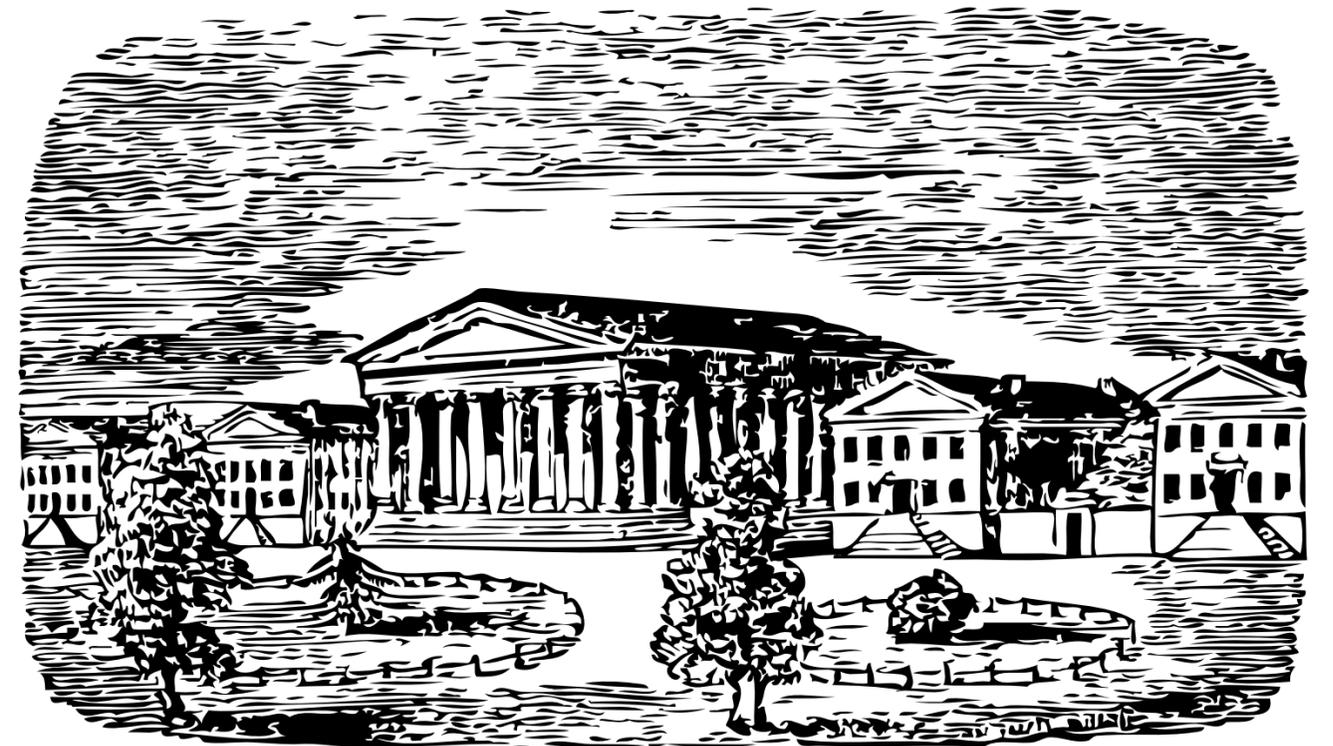
Another important data point for us was how these community groups receive information regarding events. During our interviews when asking about how they are updated about events flyers were mentioned twice, this is good to hear because Discover Central MA also offers flyer creation and distribution as part of their services. Calendars as expected were mentioned twice as well amongst the community groups and seem to be a time-tested method of informing the community about various events. Additionally, social media was one of the more widespread Social media has been a rapidly growing platform over the last 20 years, and seems that it will continue to do so. The wide reach social media provides makes it a great method of informing a community of upcoming events. Coincidentally, Discover Central MA also mentioned that they are very active on their Instagram page and frequently repost any events they tagged into their 21.4k followers.

**Table 5: Common Sources for Event Information**

Where do you get information for events?	# of Results
Flyers	2
Calendar	2
Social Network	2
Posters	1
Mail	1

## Not Every College Is Interested In Bringing The Community On Campus

During our interviews, we made it a point to understand each of the colleges' attitudes toward incorporating more community members into their campuses. Two of the notable institutions were Holy Cross and Quinsigamond Community College. When talking to the Associate Vice President for External Affairs at Quinsigamond they were very interested in the concept and wanted to push it out to their community upon completion. Holy Cross is more open to the Worcester community with respect to attendance at athletic events and art installations, as well as how anyone is free to walk onto campus anytime. In our interview with WPI, they expressed concern with the influx of non-students taking up space in events to the point where students were excluded. On top of that, they also mentioned that if a threshold of community members was expected to attend an event, a police detail would need to be hired for security, although this is expected at any university.



## Colleges Offer a Wide Variety of Events and Services

An important data point for us when interviewing the college representatives was the events that they offer to the public. We found that the most common of these events were athletic events and public speakers. All of the institutions we interviewed have some sort of athletics program except for Tufts and MCPHS.

In addition to events, we discovered that colleges offer services to the public. Tufts University offers a veterinarian clinic program by appointment as well as a 24/7 emergency room for small and large animals. Information for the clinics is available on their website. MCPHS also offers dental appointments that start at \$25 for the general public, \$15 for children, and \$5 for students from 8 am to 9:30 pm. They also offer a similar discounted optometry program that accepts insurance.

College Events Currently Offered

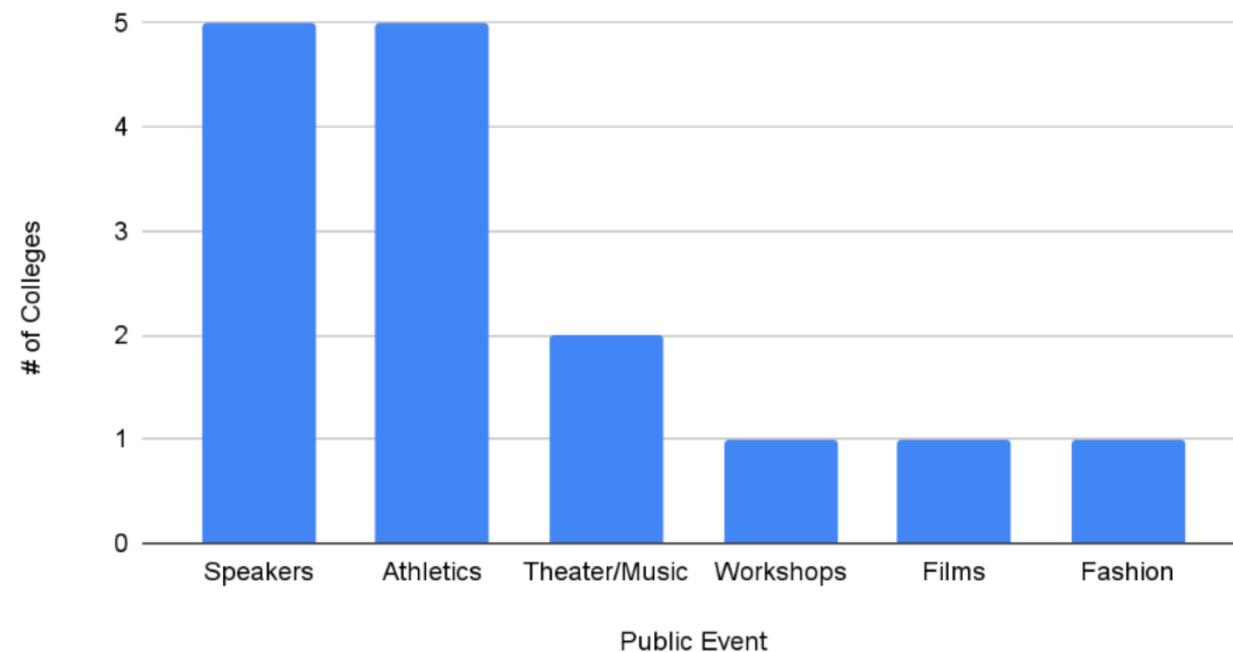


Figure 6: College Events Offered

## Colleges Primarily Use Calendars. Social Media and Email to Inform The Community Of Events

Another interest of ours with the colleges was their methods of distribution of their event data. As expected, there was a large variety of distribution methods that the universities used to get the word out. Four of the colleges we interviewed said they have their own public university calendar that was available to view. Equally as mentioned were email lists, although this pertained to those who had signed up for the list which is primarily students and faculty within the organization. Social media has been a more commonly used tool to reach out to the community nowadays, being among the most frequently used. This information gives us a good look at the most widely adopted methods being used and thus the most effective.

Event Distribution Methods By College

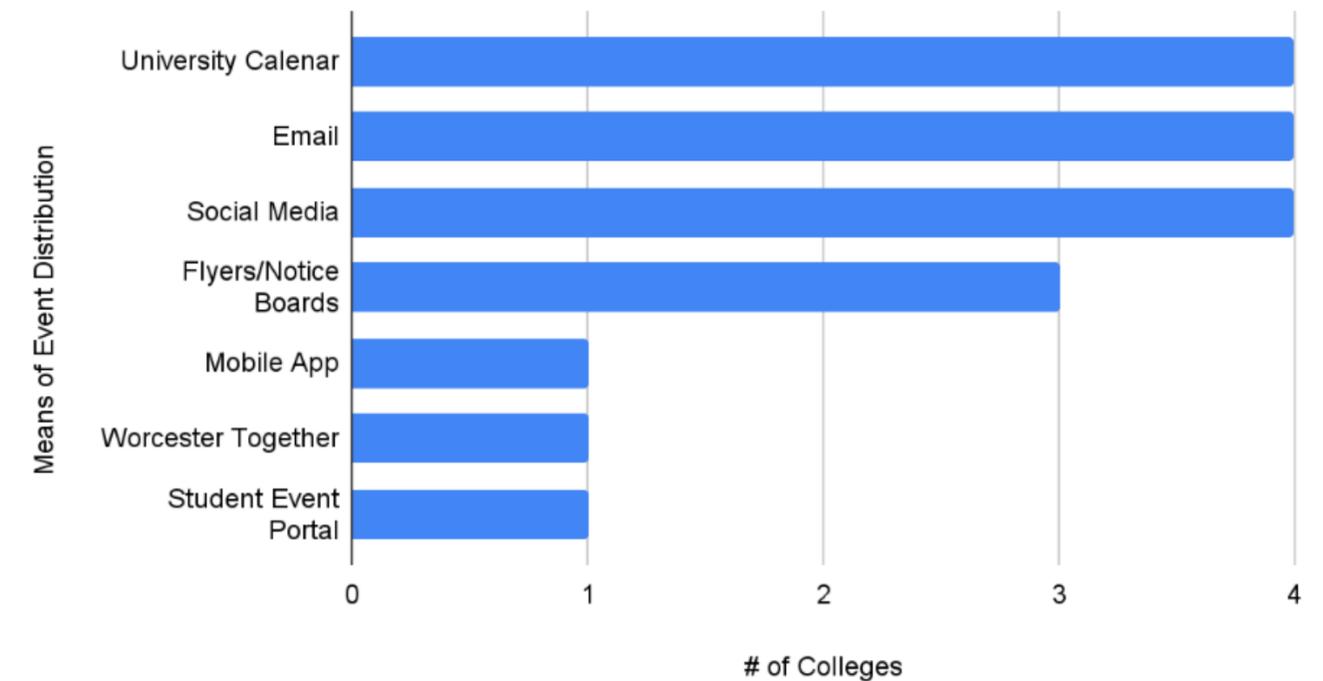


Figure 7: Means of Event Distribution

## Event Information Is Disaggregated Across Many Calendars

Our research unveiled multiple event calendars for community events in Worcester. These calendars are hosted on a range of platforms such as local government websites, community centers, college websites, and social media pages. Among the most major calendars, listed in Table 6, we discovered that event information is often disaggregated among various universities and a couple more platforms, making it important to consult multiple sources for a comprehensive understanding of local happenings.

Our examination of the existing calendars unveiled several areas for improvement. The current calendars are hosted on various platforms, which makes it challenging for residents to locate and track all community events in one location. A shared calendar could consolidate event information, making it more accessible to the public. Another problem was inclusivity, some calendars target specific sectors or demographics, such as students or culture enthusiasts. By incorporating a broader range of events, a shared calendar could be more inclusive and represent the diverse interests and needs of Worcester residents. Moreover, the existing calendars differ in terms of user interface and ease of use. Designing a shared calendar with a more user-friendly interface could enable residents to search for events effortlessly, apply category filters, and receive event notifications. Finally, individual organizations maintain calendars with limited collaboration between them. A shared calendar could foster improved communication and coordination among community groups, colleges, local government, and regional entities like Discover Central Massachusetts, resulting in more efficient event planning and promotion.

**Table 6:** List of Event Calendars

Name	Description
Discover Central Massachusetts Calendar	Managed by the regional tourism council, this calendar showcases events and attractions in Worcester and the Central Massachusetts area, covering diverse events such as festivals, sports, and family-friendly activities.
Social Web	The Social Web is a community-based website that offers a calendar of events in Worcester, which includes a combination of social, cultural, and recreational events submitted by local residents and organizations.
Worcester Cultural Coalition Calendar	This calendar displays cultural events and activities within the city, including visual and performing arts, historical events, and heritage-related activities.
Local College Calendars	Colleges in the area, like Worcester Polytechnic Institute and Clark University, have their own event calendars. These calendars mainly focus on on-campus events, lectures, and performances, but occasionally feature community events as well.
Worcester Public Library	This calendar highlights events and programs at the Worcester Public Library, from book clubs and workshops to educational programs.
Worcester City Government Events Calendar	Hosted on the city's official website, this calendar lists events organized by the city government and other community organizations, containing activities like public meetings, workshops, and cultural events.

# Deliverables

## Prototype Design

The prototype developed in this project simplifies the process of extracting event data from multiple external websites and posting it to a WordPress site by automating the procedure. The number of connected institutions is limited due to technical limitations of their websites, such as the absence of filters for general public events, difficulties in data extraction, or the lack of specific public event calendars, among other constraints. This solution is designed to fetch event information from the following educational institutions:

- College of the Holy Cross
- Worcester Polytechnic Institute (WPI)
- Clark University
- Tufts University
- Services from Massachusetts College of Pharmacy and Health Sciences (MCPHS)

The solution contains two primary components:

1. Web scraping and data processing using Python: The Python script is designed to extract event information from the target websites of the mentioned institutions using the BeautifulSoup library. The extracted data include the event title, description, start time, end time, and URL.
2. Posting events to the WordPress site through XML-RPC: The XML-RPC protocol is used to interact with the WordPress site's API. The Python script sends the event data to the WordPress site, where a custom PHP function processes the data and creates new event posts. The PHP function checks for duplicate events by comparing event titles, guaranteeing that each event is posted only once.

Additionally, the PHP function takes care of date and time conversions, changing the scraped date and time strings into a standard format ('Y-m-d H:i:s') to ensure compatibility with the WordPress site. The event data is then posted as custom post types ('tribe\_events') with the following details:

- Post title: Represents the event's title
- Post content: Contains the event's description
- Post status: Set to 'publish' to make the event publicly visible
- Post type: Designated as 'tribe\_events' to create an event post
- Meta input: Includes the event URL, start date, and end date

Once the event data is successfully inserted, the PHP function displays a confirmation message. If there's an error, a relevant error message is provided to assist with troubleshooting.

Overall, this prototype automates the extraction and posting of event information from multiple educational institutions, particularly reducing manual effort, and ensuring the target WordPress site remains up to date with the latest event details.

In addition to creating a functional prototype calendar, we took additional measures to make sure that our sponsor could efficiently use and maintain it. We created a detailed set of instructions and document specifications that clearly explain how the calendar works and how to operate it effectively. The instructions were specifically customized to meet our sponsor's requirements, using simple and easy-to-understand language. We then provided this documentation to our sponsor for future reference and use, so they can fully take advantage of the benefits of the calendar without any difficulty. By doing so, we have ensured that the prototype calendar will continue to provide value to our sponsor for years to come.

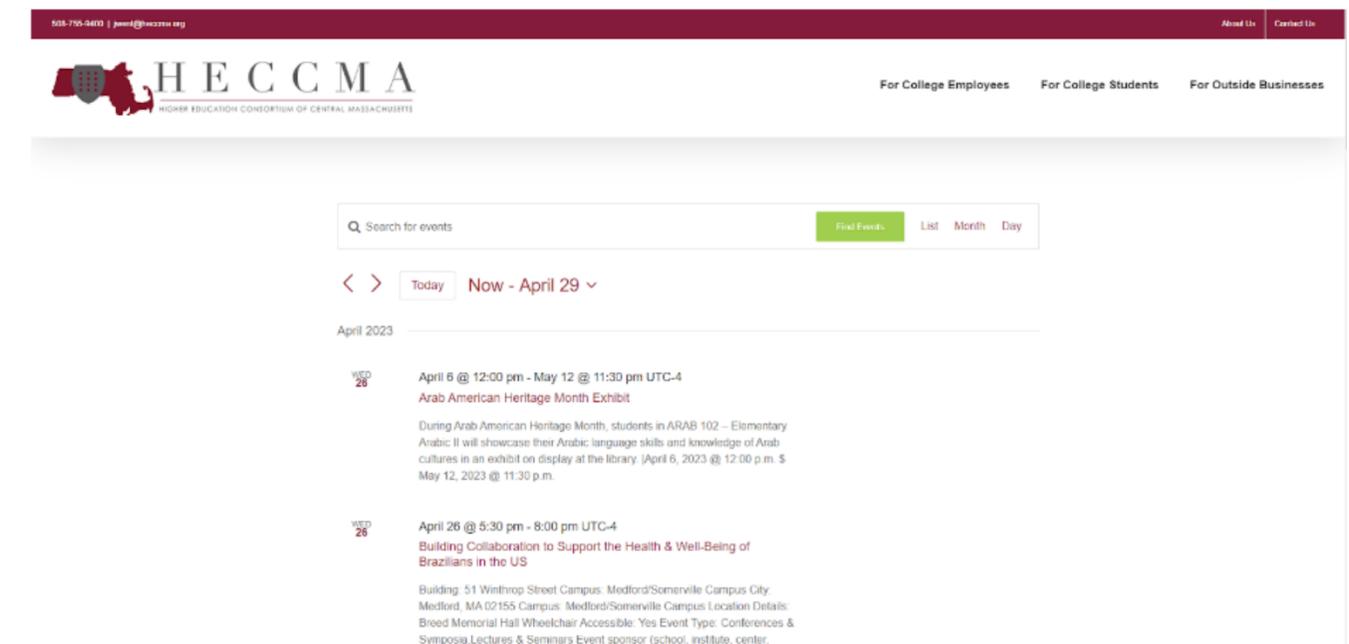


Figure 8: Prototype Calendar

## Recommendations

Through the seven-week timeline of our project, we interviewed various people who belong to different strata. From the results compiled in the 'Results & Analysis' section, we have made a list of recommendations for Discover Central MA, which will be the long-term host of the event calendar and for the colleges within HECCMA.

Our focus has been on the establishment of a shared calendar platform that encourages community engagement and fosters social connections. Although the prototype calendar functions as an effective short-term solution, our research indicates that incorporating all HECCMA universities into the Discover Central MA calendar presents a more sustainable and constantly updated long-term solution. The Discover Central MA calendar is a well-recognized platform that encompasses all of Central Massachusetts and offers various features that are beneficial for both the universities and the general public. Firstly, the Discover Central MA calendar provides promotional and marketing services for events, ensuring wider visibility. By connecting with this platform, universities can broaden their reach and more effectively promote their events. Maintaining an active presence on social media platforms, such as Instagram, can help colleges promote events and engage with the community. Moreover, Discover Central MA provides various bonus services like hosting venues, materials for orientation days, visitor guides, and familiarization tours on campuses. Discover Central MA event calendar incorporates event registration features and ticket purchasing, which simplifies the process for the public to attend events and allows universities to monitor attendance and plan accordingly. Finally, the Discover Central MA calendar includes an extensive range of events occurring in Central Massachusetts, making it a convenient destination for the public to access a variety of community events. It should be noted that Discover Central MA plans to update its website and system between mid-May and June 2023, introducing new features and enhancements. Discover Central MA charges a \$500 membership fee, which grants access to their services and features. This membership allows different university organizations to publish events from multiple logins under the name of their university, ensuring accurate representation and easier management of institutional organizations.

Based on our research findings, we propose the following recommendations for Discover Central MA to improve its shared calendar platform and better cater to the needs of HECCMA universities and the Worcester community:

1. Develop a system to automatically collect event information from university calendars and integrate it into the Discover Central MA platform. This automation would reduce manual efforts required by universities and ensure that the calendar remains up-to-date with the latest events. Our research shows that most universities are worried about the need of entering events manually and the costs it may carry.
2. Consider introducing a feature that allows universities to submit multiple events at once, streamlining the event submission process and saving time for event organizers.
3. Establish open communication channels between Discover Central MA and HECCMA universities to facilitate seamless integration and collaboration. Regular meetings or a dedicated point of contact can help address any concerns or questions from universities.
4. Include parking, safety, and ticket cost information for each event on the Discover Central MA platform, making it easier for the public to plan their visit and understand any additional costs associated with the event.
5. Create specific categories on the platform to provide to different demographics and age groups, ensuring that the events are relevant and engaging for a diverse audience. This categorization can help users find events that are suited to their interests and preferences.
6. Provide information on the accessibility of event venues, ensuring that people with disabilities can easily identify events they can comfortably attend and participate in.

By implementing these recommendations, Discover Central MA can enhance its shared calendar platform to better serve the needs of both HECCMA universities and the Worcester community. This would not only expand their reach and increase the number of users but also simplify the platform's usability for universities. This would eventually contribute to a more engaging, inclusive, and accessible event system in Central Massachusetts.

The Colleges of HECCMA can work to cater more to the community to drive more interest to their campuses. Table 3 shows what events the community group representatives we interviewed said their community would be interested in. It is important to understand what the community wants because, as touched on by multiple people we interviewed, the event calendar is only as good as the events on it. From our findings, it is clear that open gyms are what the community wants from the colleges, as well as sports events, and academic workshops. We asked the representatives to identify the activities depending on the community's age and demographic. From all the community groups which responded, the youth would be most interested in physical activities such as sports, and having open gyms. Teenagers also have an interest in physical activities, but we also understand the interest in college-level workshops in computer science and math. Lastly, the older population would be interested in hands-on arts and crafts. From these findings, we recommend that colleges and universities look to incorporate these events into their campuses for the largest community engagement:

1. Open gyms
2. Arts and Crafts Events
3. College Course Workshops
4. Becoming a Member of University Clubs

These are only recommendations, and universities should only follow these if they can safely provide these services.

From our discussions with city councilors, our sponsor meetings, and community group representatives, we learned about how to convey the college events to the community. As discussed, the event calendar needs to be a centralized solution where all events can be seen by anyone. This will be hosted on the Discover Central MA website where all the colleges will post their events. We have made a list of recommendations for the colleges to follow to make the event calendar as successful as possible:

1. Avoid splitting participants by overloading days.
2. Cooperation events between multiple universities.
3. Clarify information about the event's target audience, possible fees, and instructions.
4. Advertise events to specifically interested groups and the general public.
5. Provide a list of contacts to Discover Central MA for future integration and keep frequent communication.
6. Become a member of Discover Central MA.

We advise to not overload any day with large events because they will compete with each other. The goal of this project is to connect the community to colleges, and that is best done when events are properly distributed such that there are more opportunities for community members to attend. On a similar note, recommending cooperation between colleges is bound to make more ambitious events that will capture and satisfy a larger audience. As for the events, we are recommending that each event has a proper description, and displays useful information like target audience, fees, instructions, parking, direction, and possible services like daycare. Thoroughly describing the event which is being hosted will make the process of attending such events less stressful and more transparent for the user. We also recommend the colleges practice and exercise effective advertising methods that target interest groups as well as the general audience. The event calendar success is defined by how many people use it, and this is all contributed by how effectively the universities advertise. Lastly, we recommend that the universities become a member of Discover Central MA and keep frequent communications with them since this is where the future of the event calendar will be.

## Conclusion

Our strategy aimed to promote community involvement and enhance social connections by creating an inclusive and easily accessible shared event calendar platform. By incorporating various perspectives and following best practices, we designed a user-friendly prototype calendar that can serve as the foundation for a more comprehensive and constantly updated solution. Linking all HECCMA universities with the Discover Central MA calendar can offer a long-term solution that benefits both the universities and the general public. This integration would not only streamline event promotion and registration but also deliver valuable insights for improved event planning to Worcester residents' needs.

The development and implementation of a shared calendar for the Worcester community will strengthen the town-and-gown relations within Worcester by connecting community members with local colleges. Our long-term solution involves utilizing Discover Central MA, a large-scale user-friendly platform that serves as a valuable resource for individuals seeking information about events, workshops, and educational opportunities in their community. Our prototype, which is on HECCMA's website, shares many of the same qualities and has a lifespan that will give colleges and universities time to fully integrate and follow our recommendations if desired. Shared calendars demonstrated the potential for universities to make a positive impact on their local community through the use of technology and innovative solutions. We hope that our shared calendar will continue to serve as a valuable tool for connecting community members with local colleges and inspire other students to take on similar projects in their own communities. We believe that our project is a testament to the power of collaboration and the importance of using technology to create meaningful connections and opportunities for individuals and communities alike.

# References

- About Us | College in High School | University of Pittsburgh. (2023, March 21). College in High School. Retrieved March 29, 2023, from <https://www.chs.pitt.edu/about-us>
- About Us – HECCMA. (2022, December 14). Higher Education Consortium of Central Massachusetts. Retrieved March 29, 2023, from <http://www.heccma.org/about/>
- Bonsall, D. L., Harris, R. A., & Marczak, J. N. (2003, January 27). The Community as a Classroom. *New Directions for Student Services*, 2002(100). <https://doi.org/10.1002/ss.72>
- Britton, T. (2019). The Best Laid Plans: Postsecondary Educational Expectations and College Enrollment in Massachusetts. *The Journal of Higher Education*, 90(6). <https://doi.org/10.1080/00221546.2019.1590294>
- Bruning, S. D., McGrew, S., & Cooper, M. (2006, June). Town–gown relationships: Exploring university–community engagement from the perspective of community members. *Public Relations Review*, 32(2). <https://doi.org/10.1016/j.pubrev.2006.02.005>
- Carroll, M. C., & Smith, B. W. (2006). Estimating the Economic Impact of Universities: The Case of Bowling Green State University. *The Industrial Geographer*, 3(2). <https://digital.library.unt.edu/ark:/67531/metadc1042575/>
- Community colleges receive grants for MCAS aid: [NORTH Edition]. (2003, June 10). *Telegram & Gazette*; Worcester, Mass.
- Copeland, N. B. (2020). *Town and Gown: Examining Interactions Between Colleges and Communities*. The University of Alabama ProQuest Dissertations Publishing. ProQuest. ProQuest Number: 28022168
- Dayan, Z. (2018, April 2). Visual Content: The Future Of Storytelling. *Forbes*. Retrieved April 6, 2023, from <https://www.forbes.com/sites/forbestechcouncil/2018/04/02/visual-content-the-future-of-storytelling/?sh=127aa7133a46>
- Florida, R. (2016, September 8). America's Biggest College Towns. *Bloomberg.com*. <https://www.bloomberg.com/news/articles/2016-09-08/america-s-biggest-college-towns>
- Haar, S. (2011). *The City as Campus: Urbanism and Higher Education in Chicago*. University of Minnesota Press.
- Massachusetts Department of Higher Education. (n.d.). Commonwealth Dual Enrollment Partnership / Strategic Initiatives. Massachusetts Department of Higher Education. Retrieved March 30, 2023, from <https://www.mass.edu/strategic/cdep.asp>
- QCC. (2023). Athletic Center. Quinsigamond Community College. Retrieved April 14, 2023, from <https://www.qcc.edu/athletic-center>
- Tuten, J., Westcott, K., Drews, D., White, B., & Tailsman, N. (2015). Evaluating the Effects of Cultural Event Attendance: A Qualitative Approach. *Huntingdon*, 15, 22-38. ProQuest.
- UPenn. (2016). University of Pennsylvania: Powering Philadelphia and Pennsylvania. UPenn. [https://www.evp.upenn.edu/pdf/Penn\\_Economic\\_Impact\\_Powering\\_PHL\\_PA.pdf](https://www.evp.upenn.edu/pdf/Penn_Economic_Impact_Powering_PHL_PA.pdf)
- WPI. (2022). Great Minds/CoMPASS Scholar Program. Worcester Polytechnic Institute. Retrieved March 30, 2023, from <https://www.wpi.edu/offices/office-diversity-inclusion-and-multicultural-education-odime/success-programs/great-mindscompass-scholar-program>

# Appendices

## Appendix A

Interview Questions for Worcester City Councilors:

- How long have you been in your position?
- What part of Worcester do you represent?
- What are your thoughts on the project?
- What do you feel is your community's view on the colleges in the area?
- What community groups do you believe would provide useful input?

## Appendix B

Interview Questions for the Worcester Public:

- How long have you lived in the area?
- Do you live near a college, if so which?
- What kind of events interest you?
- What type of events have you attended on a college campus in the past year?
- Do you have a connection to anyone associated with a college (student, employee, etc.)?
- Where do you generally get your information about local events?
- If a college wanted to advertise an event to your community, what would be the best way to do so?
- Are you able to automatically translate web pages?

## Appendix C

Interview Questions for College Student Affairs and Marketing:

- How do you inform your community about events on campus?
- How are events added to your event calendars?
- Are there different event calendars for different types of events?
- What events are commonly open to the public?
- How is it conveyed that an event is open to the public?
- Are any events paid? How is that information conveyed?
- Are events tagged by categories on your website? If so, what are the options?
- Are any of your events paid? How is that information made known?
- Is there a way we could continuously export the data from the calendar in a standardized format (ex: ical, xml feed, etc.)?
- Are there any other events or services offered by the college that you think we should include (such as the dentist and acupuncture clinics at MCPHS)?
- Does your college upload any events to Discover Central MA? If so, what is your process for doing so?
- Is there anyone else that you think we should talk to about this?