A FEASIBILITY STUDY OF A BIKE SHARE PROGRAM (BSP)

ON THE UNIVERSITY OF ALABAMA CAMPUS

by

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ABSTRACT

This thesis sets out to examine how feasible a bike share program will be at the University of Alabama (UA). Three case studies of campus bike sharing programs across the United States are used to show the different bike sharing systems in existence. The advantages of a bike sharing program are highlighted to show how the system can offer alternative transportation to the university campus. The current status of bicycle uses on University of Alabama campus as well as policies put in place are also discussed. The last part of the thesis applies lessons learnt from the case studies and evolution of bike share to a feasibility study for UA campus.

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My profound gratitude to my family especially my deceased father whose sacrifice has brought me this far in life and academically. May his soul continue to Rest in Peace! and may the Almighty bless my mum, siblings and friends for their encouragement, love and support through it all.

I couldn't have made it this far without you all!!!!!!

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1: INTRODUCTION

1.1 Introduction

Bikeshare systems are increasingly being adopted in US cities; Colleges and universities have not missed the trend – and in fact seem perfectly suited for it, (Carlton, 2007). Generally, because of their central locations and wide distances between buildings, many university campuses have become hubs for flexible mobility options like skateboards, rollerblades and segways that require less complicated parking and storage.

As the population of a campus community increases, the transportation needs of the people also increases. This calls for the increase in the provision of transport services to the members of the campus community. The increasing road traffic and congestion limits the movement of the people from one point on campus to the other. Students, faculty, staff and visitors ride on campus not only as a means of transportation, but also for recreational and health benefits.

The Pedestrian and Bicycle Information Center ("Bike Sharing," 2016, p. 1) defines bike-sharing as a 'transportation program that allows for point-to-point bicycle rental from self-serve bicycle stations'. Zagster (2015) believes that, a bike-sharing program is a non-motorized bike rental service, usually meant for short trips. It provides users with secured bike pick-up at several docking stations and the ability to return the bike at any of the stations. Universities and colleges use the bike-sharing program to provide affordable and environmentally way of assisting students to move around and off campus.

Several advantages of campus bikeshare program (BSP) are gleaned from the literature. A campus bikeshare program "is a highly visible program that promotes environmentally and sustainable transportation by providing a healthy and sustainable alternative to getting around campus and adjoining neighborhoods" (Auburn University, 2016,p. 2). In this sense, a bike-sharing program is a viable and tangible step towards a greener and healthier campus. It also aids in reducing the total number of bikes on campus by allowing users with varying schedules to essentially use the same bike. For instance, under a bikeshare program, a hundred students could be served by ten bikes for a day instead of hundred individual bikes.

An increasing recognition of the negative impacts of car use has emerged over recent years, in terms of congestion, air and noise pollution, safety, climate change and reductions in physical activity. It is this policy context, combined with increasingly affordable payment and tracking technologies, that has provided the platform for the extraordinary growth of bikeshare, (Fishman, 2016). The bicycle is currently the most energy-efficient vehicle commonly used, measured to be even more efficient than walking, which makes bike sharing an effective solution in cutting down carbon emissions and other harmful pollutants. Investing in bicycling returns large savings for a community, (Rotmans et al., 2000).

Literature points out that, a bike-share program is a cost-effective and sustainable measure to address prevalent transportation issues on university campuses. A bike sharing program frees the average student from paying to store his/her vehicle that is rarely used and also reduce the parking strains on campus. By providing a supplementary mode of transportation, bike-sharing has the capacity to increase connectivity between existing campus transit systems and gradual mode shift among the campus community.

Biking as a form of transportation is very common on university campuses. The increasing road traffic and congestion limits the movement of the people from one point on campus to the other. This calls for the increase in the provision of transport services to the members of the campus community; faculty, staff, students and visitors. Bike-share opens mobility options that weren't previously convenient to the campus community and makes transit systems more viable for trips on and off campus, (Auburn, 2016).

1.2 Problem Statement

Student and vehicle population at the University of Alabama (UA) has increased steadily over the past decade. In response, a number of residential halls and parking decks have been constructed to cater to these increases. Some of the campus community use bikes as an alternative mode of transportation, but at the end of each semester most of these bikes are abandon on campus. For instance, the past summer the university impounded about 389 bikes (Transportation Services, 2018). Currently, the Transportation Service on campus is considering the introduction of a Bike Share Program on campus. However, there are no studies that show how feasible a bike share will be at the university campus. This study was intended to fill the gap.

1.3 Research Goal and Objectives

The study aims at exploring the bike share needs of the University of Alabama. Specific research objectives were the following,

- Explore the current status and policies governing bicycle use on UA campus
- Review existing bike share programs in the Southeast
- Explore what potential users expect from a bike share program

- Recommend suitable Bike Share Policies for the UA community

1.4 Methodology

To address the research objectives, the mixed method approach was adopted for this study. The method according to Creswell (2006) gives the researcher a broader understanding of the research problem as well as alternative tools not available with the quantitative or qualitative approaches. Data was collected from both primary and secondary sources. The primary data was obtained through a formal interview and administration of questionnaires. Secondary data was obtained from case study of existing literature on campus bike sharing programs and content analysis of bicycle-use policies and programs of the University of Alabama.

Data Collection

The case study approach was used to obtain information on bike sharing systems in some universities in the United States. The approach helped in identifying how these systems were established, how they are operated, the problems they face and lessons to help implement the program on the University of Alabama campus. The director of the Transportation Service on campus was interviewed to solicit information on their take on a bike share program as an alternative mode of transportation on UA campus. Interacting with the Director of Transportation Services was also aimed at getting insight into the current bicycle use on campus.

Permitted bicyclists (persons who have registered their bicycles with the Transportation Services) in the university were chosen for the questionnaire survey. The bicyclists were chosen for their hands-on experience with bicycle use on campus. The population size of the respondents was 3386. The University of Alabama Qualtrics survey platform was used to send

out the questionnaire to permitted bicyclists to gather information on the current use of their bikes, problems they face, whether or not they will use a bike share, as well as their expectations from a bike share program. However, only 263 of the sampled population responded to the survey.

Data Analysis

The quantitative data acquired from the survey was statistically analyzed with the Qualtrics software. The descriptive statistic tool associated with Qualtrics software was used on the quantitative data acquired to know the socio-demographic information of respondents and their potential use of a bike share program. The qualitative data was transcribed and interpreted on the basis of information gathered from the key informant and survey respondents.

1.5 Limitations of the study

As with most research, many short-comings are associated with the study. First of all, the researcher had to obtain an Institutional Review Board (IRB) approval to conduct survey on campus. The application process took the entire Fall 2018 semester due to inadequate information acquired from the UA Research Compliance office. Less information was also obtained on the three campus bike share programs reviewed as these programs are new and research on them are still on-going. Also, survey questionnaires were administered to only permitted bicyclists on campus.

2: THE BIKE SHARE SYSTEM

This chapter discusses the evolution of the bike share system, and the benefits of a bike share program. The evolution looks at the three generations of the system that have been in existence since its introduction and the two main bike share programs associated with the third generation system currently operated in the US. The types of bicycles associated with the bike share types are also discussed. This chapter will inform UA stakeholders of the types of bike share programs operated and the challenges they face so that they can draw lessons from them.

2.1 Evolution of Bike Share

Bike sharing programs have evolved over the years, initially consisting of free-to-use bike systems and followed by coin-deposit systems, and today's IT-based systems, (Shaheen et al., 2010). Bike share systems have evolved through 3 generations. Technology and user options are the main differences between these generations. Current bike share programs across the world can be considered third generation due to the high use of technology.

First Generation Bike Share (1960s)

The first generation bike share system was introduced in the 1960s in European countries, (Metrolinx, 2009). This system saw the free provision of bikes by private individuals and organizations to communities and municipalities. These bikes were randomly placed, and users could pick and drop them off randomly within the community. The first system was introduced in Amsterdam (Netherland) in 1965. France and the United Kingdom also went for the first generation bike share system, following the Netherlands, (Metrolinx, 2009).

These systems however failed shortly after they were introduced. Theft and vandalism of the bikes led to the collapse of these bike share systems. The bikes provided were unlocked and users could pick and drop them off anywhere. This compromised the security of the bikes and led to the collapse of the system. The first generation bike share system, however, still exists in some parts of the Netherlands today through city revenue funding, (Wikipedia, 2019).

Second Generation Bike Share (1990s)

The second generation bike share system introduced in the mid-1990s saw the provision of bikes to communities through governmental and private grants, from city and corporate revenues. The bikes provided were centrally located with staff who regulated the bike use. This was an improvement in the previous generation of bike share systems. Introduction of bike stations, bike locks and deposit machines for access came with the 2nd generation. The bike share system in Copenhagen, Denmark falls under the second generation bike share, (Metrolinx, 2009).

The coin deposit system was used to unlock bikes from the designated bike station. Bikes could only be picked up and dropped off at the bike station, unlike the first generation system where bikes were randomly placed. The coin deposited was refunded once the bike was returned. The bike station was not automated but operated by employees or volunteers. The system was characterized by short-term bike rentals, (Wikipedia, 2019).

Third Generation Bike Share (2000s)

The third generation bike share system introduced in the late-1990s and early 2000s is the most technologically advanced form of the bike share system. The system is highly characterized by the use of the Global Positioning System (GPS), Bike kiosks, apps for locking and unlocking

bikes, electric bikes and other technological innovations. Unlike the 1st and 2nd generations, this system is very secured preventing theft and vandalism. Current bike share programs in the United States and other parts of the world are considered third generation bike share systems, (Metrolinx, 2009).

The system offers automated bike stations with or without staffed stations. Riders register through mobile apps with their credit/debit card details to use the bikes provided. Members use their registration details to unlock a bike at any designated bike station and can return the bike to any other designated station. The third generation bike share system offers long-term bicycle rentals to users and offers several options to users to access bikes. There are two basic types of this bike sharing systems. Namely, the bike library and distributed bike sharing, (Zagster, 2015).

Bike Library

A bike library as a form of bike sharing offers a central, staffed location where publicly available bikes are stored and checked out to riders. It often carries different types of bicycles for different purposes. This type of bike sharing supports specialized bikes, such as mountain bikes, group as well as personal bike rentals. Low rental cost and varying bike checkout times are additional characteristics of the bike library form of bike sharing, (Zagster, 2015). *Figure 1* shows a bike library form of bike share.

Figure 1 Bike Library Bike Share (source: Open Source Bike Share)

Distributed Bike Share

Under this system, bikes are made available at several locations and checkout is mostly done with technology hence cheaper and convenient to use. There are three types of distributed bike share system: Ad-hoc system; Kiosk or tech-on-station; and tech-on-bike. The Ad-hoc system is associated with free bike use with no management technology. The kiosk system allows riders to rent bikes from an automated station and riders can only return the bikes to the open station. Tech-on-bike has unlocking and rental technology on the bikes. Riders can start and end trips at any rack location with the Tech-on-bike system, (Zagster, 2015)**.** The Zyp Bike share system in Birmingham, Alabama is an example of the Tech-on-bike distributed form of bike share as cyclists can check-in and out at designated bike stations. *Figure 2* shows a deck station for Zyp

Figure 2 Distributed (Tech-on-bike) Bike Share (source: Alabama news center)

2.2 Bike Types

Traditionally, regular bicycles were the main devices associated with the bike share system. However, recently electric- bicycles and kick scooters have been incorporated into the system given users wider options to use from. The devices are discussed below.

Regular Bikes (Traditional bikes)

The regular bike is a much efficient and environmentally friendly commuting vehicle. Though not as faster as powered vehicles including electric bikes, the regular bike is convenient and easy to maintain. There are several forms of the traditional bikes. These include road bikes, mountain bikes, fixed gear bikes, cyclo-cross bikes, among others. The traditional bikes are manually operated unlike the pedal-assist bikes. Regular bikes are commonly used everywhere in the world.

Regular bikes are environmentally friendly, cheap and easy to use. They are lightweight and responsive to user manipulations. They are easy to maintain, service and secure. Regular bikes are heavily dependent on rider efforts and are difficult to pedal in hilly areas. A disadvantage is that, they are difficult to be use by the aged and physically challenged without assistance. In addition, they have less mobility and do not travel as fast as the pedal-assist bikes.

Electric-Bikes (E-Bikes)

The electronic bikes, also known as 'pedal-assists' have been in use since 2010 mostly in China and some European countries. E-bikes are bicycles with battery powered "assist pedals or throttle", (EVELO, 2018). There are low-powered and high-powered e-bikes. These two bikes vary in-terms of the distance they travel. The low powered ones can travel between 25-32km/h whiles the high-powered ones can travel for about 45km/h (Wikipedia, 2018). Lime and Jump are two bike sharing companies in the US that use e-bikes in their major operations, whiles Capital Bike share just added e-bikes to its bike sharing system.

There are 3 main components of an electric bike; the batteries, the motor hub, and the controller which are integrated into the design of the bike. The motor controls the movement of the wheels, reducing the human pedaling efforts. There are 3 parts to the motor; the front hub, rare hub and middle hub each controlling a different part of the bike. Unlike traditional bikes, the batteries in an e-bike controls its pedaling requiring little or no human effort to move the bike. The controllers help the rider to regulate the bike, for instance braking, (EVELO, 2018).

Electric-bikes are powered by the in-built battery, allow faster travels and can travel in hilly areas. The aged and physically challenged can easily use e-bikes as they require no or less human effort. They are easy to maintain and can be used just as regular bikes when batteries are

off. However, the effective operation of the e-bike is dependent on the efficiency of the batteries attached and how well they are maintained. E-bikes are difficult to pedal in hilly areas when the batteries are out, and their heaviness makes it difficult to secure them. These bikes are expensive to acquire and maintain, the average price is about $1200, (ELEVO, 2018).

Scooters

A scooter is a human/ electric powered motor vehicle with a step-through frame and a platform for the riders feet. The scooter sharing system allows users to rent a scooter on a short/ long term basis just like the bike sharing system. Several types of scooters have evolved over the years and each of these has its own make up. The Kick scooter is the main type used in the bike/scooter sharing system (Wikipedia, 2018). Lime is one of the companies in the US that offers scooter sharing together with bikes.

The Kick scooter device is composed of the deck, bars and wheels. The bars are the handles for the rider and the basic connection between the rider and the scooter. The deck is the main built and steering tube of the scooter. It’s also where the rider puts his/her feet to regulate the device. The wheels(tires) supports the movement of the scooter. The scooter is an easy and convenient way to move around. Scooters are affordable, easy to operate and more convenient for parking. Also, scooters are easy to acquire and maintained as compared to a car, (Wikipedia, 2018).

In summary, the bike sharing system since its evolution has offered different programs with different advantages in terms of implementation, technology and usage. Bicycles and scooters are the common devices associated with the bike sharing system. Each of these devices

has its own characteristics, benefits and problems. It will be interesting to find out from our survey the preference of bicyclists on the University of Alabama campus.

3: RESEARCH FINDINGS

This chapter discusses the findings of the study. It specifically addresses the objectives of the study, namely, 1. The current status and policies governing bike use on UA campus, 2. Explore the expectations of potential users and 3. Make policy recommendations for UA's bike share program.

3.1 Current Status of bicycle use on UA campus

The existing bikeways at the University of Alabama consist of shared roads and off-road paths. Most of these paths are used by both pedestrians and cyclists causing conflict between the two users. Also, there are streets on campus that do not have marked bike paths, but cyclists are allowed to ride with traffic on those streets. Moreover, there are some streets on campus where cyclists are not allowed to ride, and violation of this regulation as well as traffic regulations attract fines to the offenders. Some violations according to the Transportation Services (2018) may be treated as non-academic student violations.

Also, the Transportation services has provided bicycle parking racks across campus for security and safety. Riders are advised to lock their bikes at the racks to avoid theft. Improperly parked bikes, against trees or buildings and those on pedestrian ways are subject to removal by authorized persons. Campus bike parking is recommended for cyclists as a safety precaution towards the protection of bikes. Bicycles packed in these racks over a specified period of time are also subject to confiscation by the transportation service.

According to the Director of the Transportation Services, bicycle use in the University of Alabama has grown greatly over the years but at a slower pace compared to other universities in the Western part of the country. There are quite a large number of the campus community using bicycles as a form of self-transportation to and from campus, though there are a few that use them as alternate transportation. The directorate believes bikes are brought to campus because students mostly think they are supposed to have a bike, yet these bikes are abandoned when students have no need for them, especially when school breaks. The Service is then tasked to impound all these bikes and safely keep them for about 6months before they can let go of them through auctioning.

Also, the University accepts that concerns exists within the university campus regarding safe use of bicycles. Pedestrians are concerned with potential road crashes with cyclists, mostly in rush hours. Riders are also concerned with their safety in the increasing traffic on campus, and the security of their bikes. There are also concerns about the University regulations on bike use, inadequate bike racks and paths that affect their bicycle use on campus.

To address these challenges, the university Transportation Services intends implementing a bike share program on campus. With this system in place, they believe bicycle use on campus will be enhanced and the influx of unwanted bikes to campus would be prevented. The program they believe will also encourage the campus community to engage more in bike use for movement around UA campus whiles at the same time reducing traffic congestion on campus. The directorate is hopeful that as students engage in a campus bike sharing program, they may be encouraged to continue with it as they move forward in life.

3.2 Existing UA Bicycle Programs and Policies

The University of Alabama (UA) Transportation services and other units have put in place some policies aimed at enhancing bicycle usage on UA campus. These policies according to the Transportation services are purposed to ensure the safety of pedestrians, riders and the entire campus community, especially during heavy traffic hours. The policies are also to ensure safe movement to and from the university campus, prevent theft and vandalism of bikes, and protect the needs of the campus community, (UA Parking Services, 2018).

The University of Alabama Recreational Center has a bicycling program called 'Bama Bikes' where students are able to hire a bike for a period of time. This initiative is aimed at providing an alternative and cost-effective way of moving in and around the university campus. The initiative not only provides bicycles to riders but also gives them the opportunities to take up safety equipment such as helmets to safe riding. The center also has some bicycle service centers around campus that provide support to bicyclists with bicycle problems. The 'Bama Bikes' program though can be regarded as a Bike Library form of the bike share system; it is not a bike share program on campus.

To ensure that all riders on the university campus are given the necessary support, the University Parking Services has provided the opportunity for campus community to register their bikes within the UA Transportation system. The registration process is free and easy as the campus community can use the online resources to register their bikes without personally going to the Transportation services office. This is a good means of helping protect the properties and needs of the campus community.

The University Transportation Services and recreational center have put together a set of rider instructions which are made available on the official website of the recreational center and a “Practicing Bicycle Safety” (URec, 2018) video on YouTube that educate riders on the bicycle policies enforced by the university and the State of Alabama. They include;

- The need for riders to use helmet and dress to protect themselves properly for safety
- Road traffic regulations, hand gestures, appropriate lane use, and safety at intersections.
- State laws and regulations regarding riding with light at night and road hazards.
- Being polite to other road users by sharing the road and road responsibilities to avoid preventable road accidents and
- One person per bike with exception to riding with a child who must be in a helmet

3.3 Campus Bike Share Programs

Case Study of Campus Bike Share Programs

This section reviews three different campus bike sharing systems in the Southeast United States to draw lessons for the University of Alabama bike share program. The Auburn University, University of Kentucky and University of South Florida campus bike share systems are discussed to highlight their similarities and differences in terms of implementation, operation and use.

3.3.1 Auburn War Eagle Bike Share Program

The War Eagle bike share was launched in 2016 to supplement the existing transportation system available at Auburn University. The program was implemented through a partnership between the Auburn Transportation Services and Social Bikes, (Auburn, 2016). In Summer 2017, the City of Auburn joined the partnership to extend the program to the city residents, (City of Auburn, NA).

Auburn Parking Services (2016) asserts that, the program was implemented to efficiently serve the transportation needs of the campus community and to protect the environment. According to the Transportation services, the bike sharing system was aimed at helping the campus community to easily move around campus and reduce their transportation cost. The system, they believe is also a good way of reducing the carbon mission on campus and improving the overall health of the people.

The bike share system at Auburn is a tech-on-bike (distributed) form of bike sharing. The bike stations provided are automated and not staffed. Riders can use the system by registering through the Social Bicycles website or App using their campus credentials and credit card details. To use a bike through the system, registered members can visit any of the bike hubs on campus, log in with their account number and pin to unlock a bike from the dock without reservation. Members can also reserve bikes through the Social Bicycles app choosing a dock of their choice. Riders can return the bikes to any of the allocated bike stations.

The War Eagle bike sharing system is used by all members of the university campus community (faculty, student and staff). Riders have a free 2 hours ride with the system after which they pay $5 per hour or $25 per bike for a day. Although members can ride the unlocked bikes anywhere within the Auburn community, there is a $50 fine for members who ride to areas outside the Auburn community. Riders are fined a $5 fee when they park bikes in undesignated stations but within the service area and a $25 fee for parking bikes outside the service area. Bikes can be rented any time of day and each member is entitled to one bike.

Figure 3 Auburn War Eagle Bike Share (Source: Gotcha Bike- Auburn)

The success and expansion of the Auburn bike share program emphasize the relevance of a bike share program as an alternative mode of transportation. Also, there are no reports of financial difficulties with the program implying a partnered bike share program reduces the financial burden of the parties involved. This funding option seem fitting for UA's bike share program.

3.3.2 University of Kentucky Wildcats Wheels

The Wildcats Wheels is a bike share program that provides free bicycle use and repair assistance to University of Kentucky campus community. The program is funded and operated by the Campus Transportation Services department and staffed by student employees who help with the daily operations, (UK, 2017). The program primarily recycles abandoned bicycles from the campus and reuses them for the bike sharing program.

The Wildcats Wheels is a Bike Library form of bike share with a centrally staffed bike station. Student employees manage the day-to-day operations of the program. The campus community can use their campus credentials to access the bikes provided. Students can either use the student rental option or residential fleet option to access the available bikes, whiles faculty and staff can use the departmental system to access bikes. The residential fleet is offered to residential halls and maintenance of the bikes in the residential fleets lies with the hall management. The department system offers faculty and staff 16 weeks of free bike use.

University of Kentucky (2017) offers that, the Wildcats Wheels is a way of offering free bicycle use to the campus community through recycling of abandoned bikes on campus. According to the Transportation Services, the bike library program has helped reduced personal bicycle use and abandonment on the university campus. The program they believe, has increased movement on campus and has also reduced traffic congestion on campus.

The program offers different rental options for students; weekly, semester base and residential hall fleets. Students, faculty and staff can access the bikes daily, monthly and on semester bases using their campus credentials. Though the program is free to students, users are tasked to keep the bikes well and return them on time or pay for maintenance, theft and late fees.

The residential fleet is offered to only students and faculty in residential halls. Faculty and staff may also use the program through the departmental system where they can rent the bikes through assistants free for a period of 16 weeks at a time, (UK, 2017).

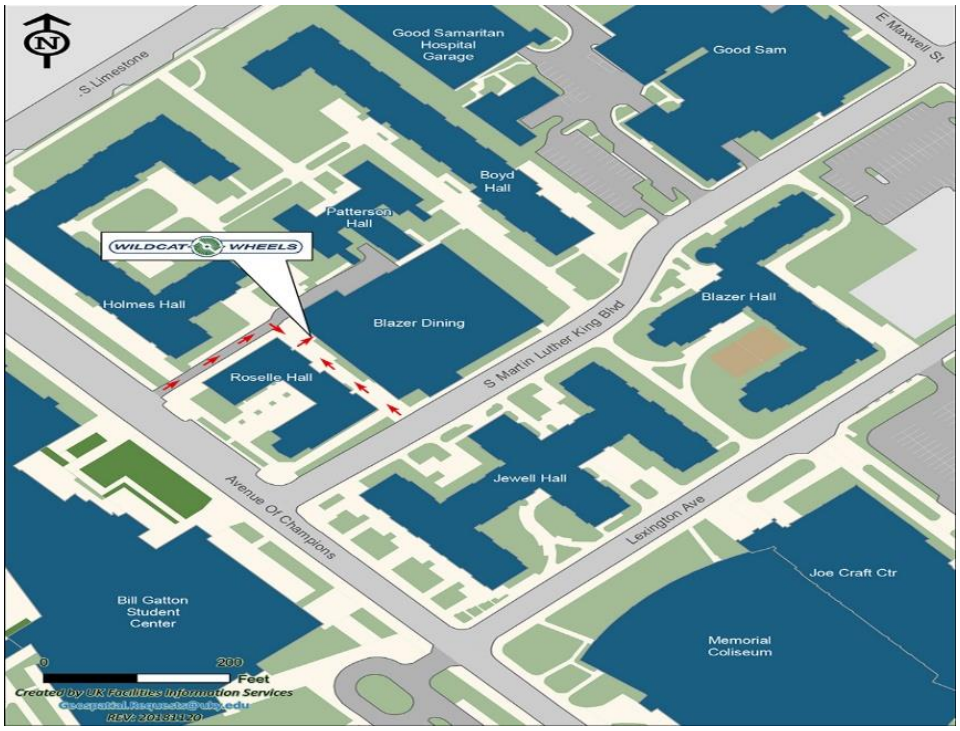


Figure 4 Wildcats Wheels Station Location (source: UK Transportation Services)

University of Kentucky's bike share program faces some limitations in terms of operation and services rendered to users. The program is mostly run by students and so when these students graduate, new students have to be employed to take over its operations. The daily rental system also poses challenges to renders making the semester-based popular. The limited bikes made available to residential halls and departments also restricts the use of the program.

To offer a free bike share program on UA campus, the Transportation Services could recycle impounded bicycles and offer them with a bike share program. This will help reduce the capital and operating cost of the program. In addition, the 'Bama Bikes' initiative could be

enhanced to serve as a bike library to the campus community since it's a known and accessed program already on campus.

3.3.3 University of South Florida (USF) Share-A-Bull Bike Share Program

The Share-A-Bull bike share program in USF is an initiative that was funded through the Student Green Energy Fund, a program aimed at reducing carbon emissions on campus. This allows students, faculty and staff free use of bikes for some periods. The USF bike share program is a Tech-on-Bike (distributed) system which allows authorities to track the bikes and helps riders to locate available bikes for use (USF,2014).

The University of South Florida(USF) went for the bike share program because they believed, bike share increases mobility options available to the campus community and enhances public transit use. The USF officials also believe bike share enhances movement around the campus by reducing travel time, as compared to other forms of transportation. Bike sharing is asserted to give direct access to most buildings on USF campus, (USF, 2014).

To use the program, the campus community can register on the Share-A-Bull website with their campus credentials and credit/debit card details. Members/ riders can access bikes at any of the designated and automated bike stations on campus with their registration details. The Share-A-Bull system offers the campus community a daily, monthly and yearly rider option. Riders can use a bike through the system daily by paying a $8 fee, monthly by paying $17 and $59 to ride with the system for a year. The monthly and yearly fees are for students only and registration is done with their university details. There is an automatic renewal for the monthly and yearly subscriptions.

Figure 5 USF Share-A-Bull Bike Share (source: USF Oracle News)

The Share-A-Bull system however faced issues of misuse and lack of funds for repairs since the program was free to use, (The Oracle, 2017). With decrease in funds and low patronage through imposed fees, the Recreation center has handed over the operation of the program to CycleHop, a private bike share investor. Coast Bikes provides services within and outside the University campus. Customer services, repairs and provision of bikes for the program are in the hands of Coast Bikes. Looking at this, UA officials can avoid self-sourcing a bike share program to eliminate any financial difficulties they could possibly face with the operation of a bike share program on campus.

3.3.4 Comparison

School	Type of BS	Operation	Cost	Service
Auburn	Distributed (tech-on-bike)	Social Bicycles and Parking services	$25/day (registration)	Campus community
University of Kentucky	Bike library	Campus Transportation services (student employees)	Free, with penalty fees	Campus community, residential and departmental services
University of South Florida	Distributed (tech-on-bike)	Coast Bikes	$8/day $17/month & $59/year for students	Campus community, the cities of Tampa and St. Petersburg services

Table 1 Comparison between the 3 campus bike share programs

In summary, campus bike sharing programs are aimed at achieving more efficient movement around campus by reducing personal vehicle usage, improve campus traffic congestions and reducing parking strains. Improving health of students, faculty and staff is also key to the campus bike share programs. The three campus bike share programs studied were found to be initiative of the campus Transportation services. However, these programs differ in terms of their operation, cost and type of system offered (Distributed by Auburn and USF and Bike library by UK). Whiles University of Kentucky offers a free system to the campus community, riders with Auburn and USF's bike share systems pay to use bikes. Also, Auburn and USF have partnerships with private providers. University of Florida's partnership is due to the financial problems it faced with the free provision of bikes.

3.4 Expectations of Potential Users

A total of 226 permitted bicyclists on campus responded to the survey to give information on their current bike use and their potential use of a bike share program on campus. Out these respondents, 41% agreed to use a bike share on campus, 27% said they would not use a bike share and 32% were not sure if they would use a bike share. These responses were attributed to why respondents believe there is (or not) the need for a campus a bike share. *Figure 6* shows potential use of a bike share program on campus by respondents.

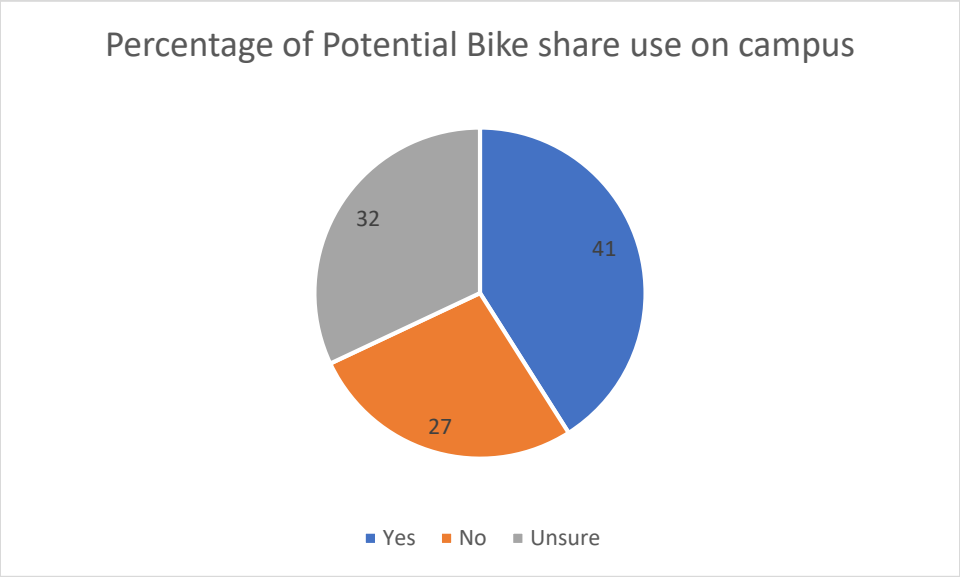


Figure 6 Potential Bike share use

The respondents that agreed to use a bike share believe that there is the need for a campus bike share program because, a bike share program could help improve traffic on campus if more of the campus community use it and improve movement on campus, reduce campus parking problems if students tend to use bikes more, help students reach transit stops on campus and also serve as a form of physical exercise to the campus community. However, respondents that did

not agree to use a bike share program on campus believe that a bike share program will rather increase students campus expenses as they would have to pay to access bikes. They also believe a bike share will flood campus with bikes there by reducing its beauty. *Figure 7* shows why there is (or not) the need for a campus bike share program.

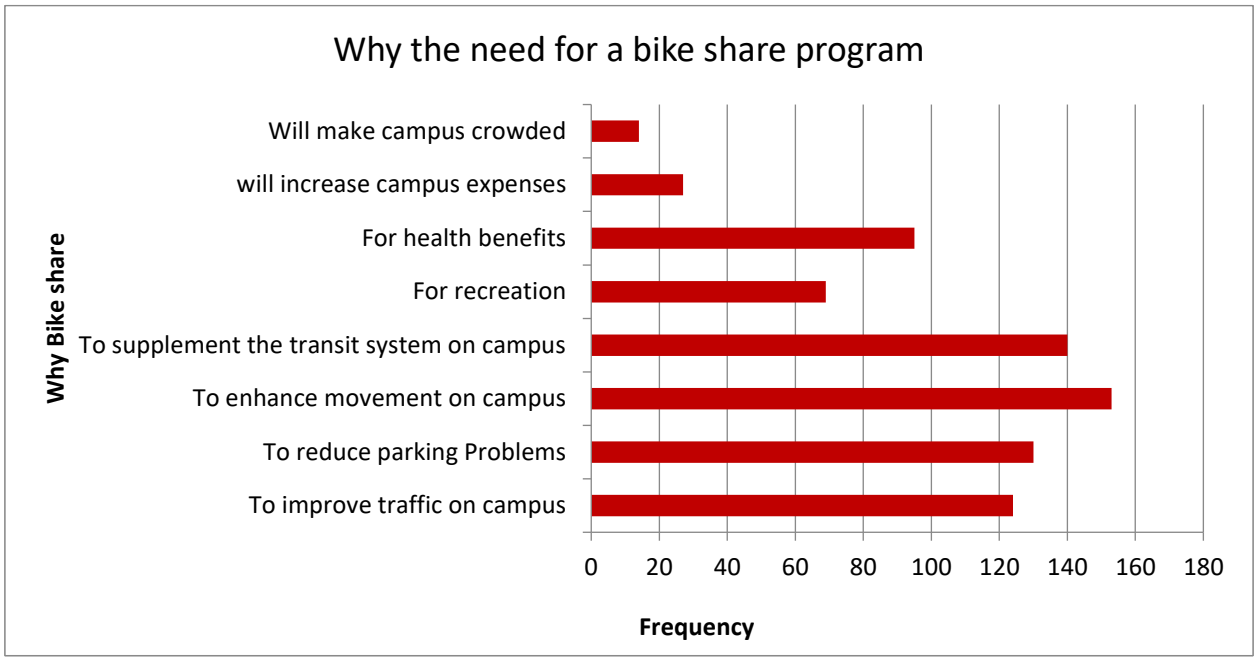


Figure 7 Why the need for a bike share program on campus

The figures below describe the socio-demographic characteristics of survey respondents

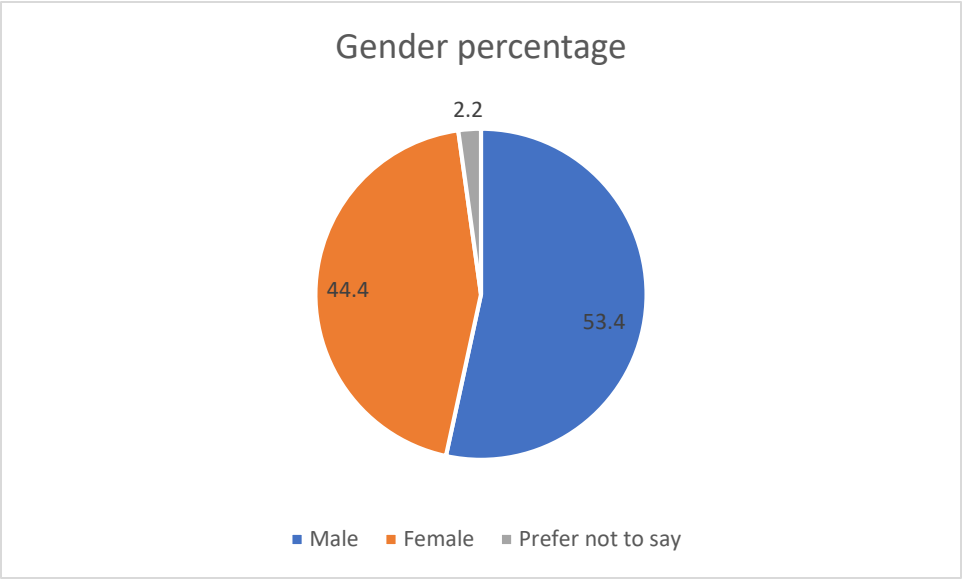
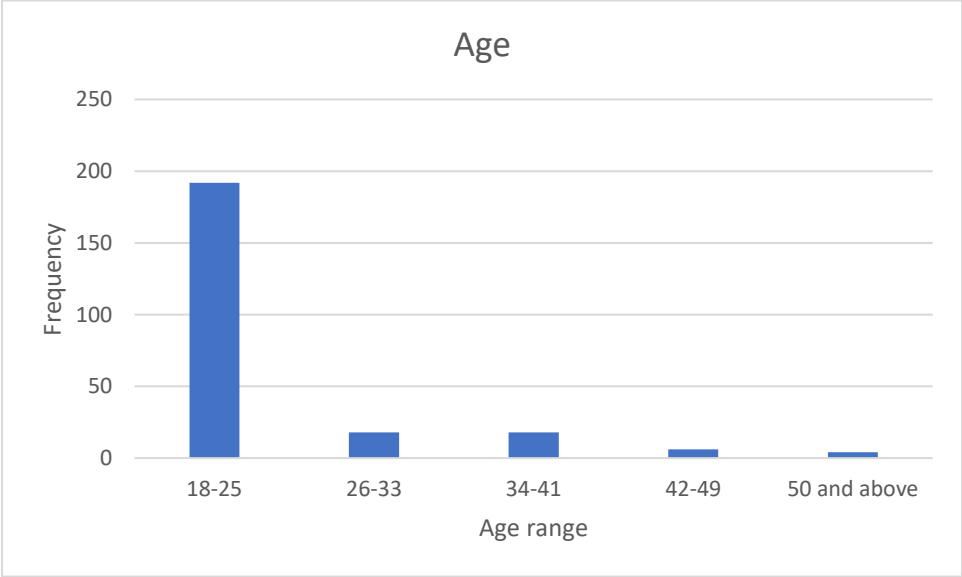


Figure 8 Gender of Respondents

On the issue of gender, it emerged that 53.4% of respondents were males, 44.4% were females and 2.2% preferred not to disclose their gender. This shows that bicycle use on campus is largely dominated by males and as such potential bike share use may be male dominated.

Figure 9 Age of Respondents



In determining the age cohort of respondents on campus, majority (86%) were identified to be between the ages 18-25, 8% between the ages 26-33, 3% between the ages 34-41, 2% between the ages 42-49 and 1% were 50 years or above. This implies that potential use a campus bike share program will largely be by students with less faculty and staff as they are between the age cohort of 42 and above.

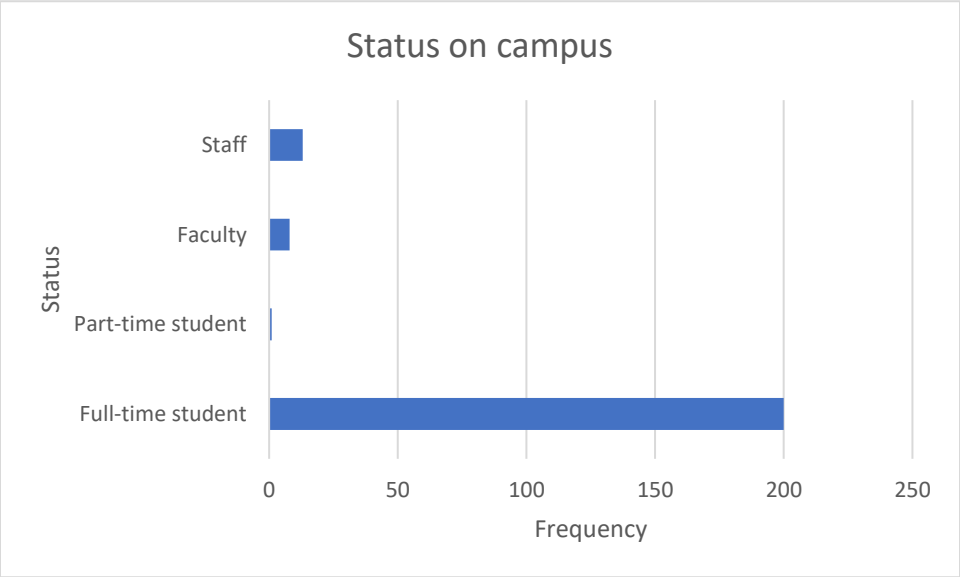


Figure 10 Status of Respondents on Campus

On the issue of respondents status on campus, full-time students that responded to the survey were about 90%, part-time students were 0.4%, faculty 3.6% and 6% of respondents were staff of the university. This shows that there are more regular students currently using bikes on campus than part-time students. There is also a significant number of faculty and staff currently using bikes which may influence their potential use of a campus bike share program.

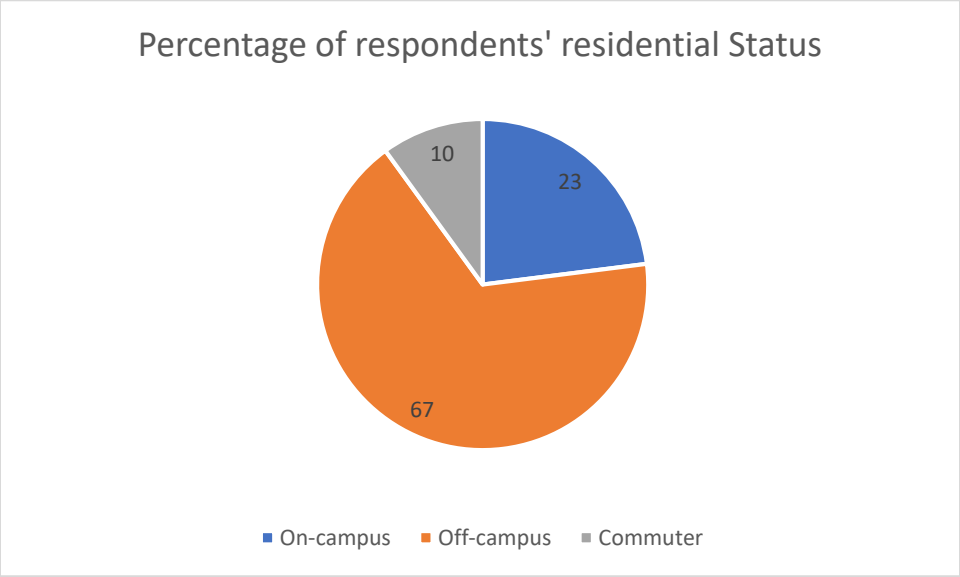


Figure 11 Residential status of Respondents

To determine the residential status of respondents, it was realized that 23% of the respondents live on campus, 67% live off campus, whiles 10% of respondents are commuters. This means that the campus populace that live off campus or are commuters are more likely to use a bike share program if it means they get to use their personal vehicles less frequently.

To identify the current mode of transportation of respondents, it came out that 41% use their personal vehicles as their major mode of transportation, 1% car pool with their friends and mates, 26% use the city and campus transit to get around, 23% ride their bikes as their major mode of transportation and 9% walk. This means that with a bike share program on campus, there will be a potential increase in bike use which in tend will reduce the use of personal vehicles on campus. *Figure 12* shows the current mode of transportation of respondents.

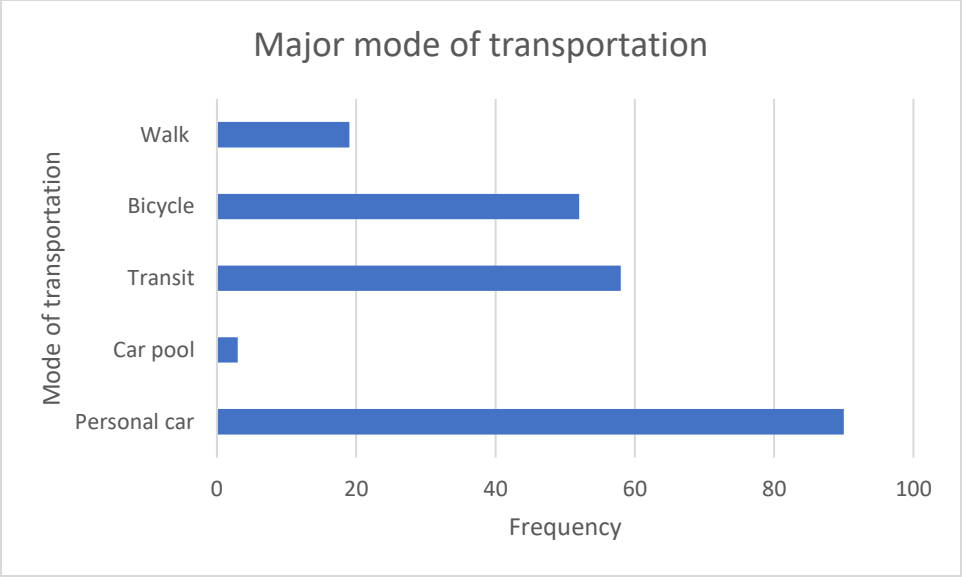


Figure 12 Respondents' major mode of transportation

Respondents were asked through the survey to identify factors that impede bicycle use on campus. Climate was identified as the major challenge to bike use on UA campus. Inadequate bike lanes came next, followed by road traffic, road safety, and pedestrian attitude. The least challenge identified to influence bike use on campus was inadequate bike racks. These challenges should inform stakeholders of the issues that confront bicyclists on campus and find ways and means to address them to ensure proper implementation of a bike share program on campus. *Figure 13* identifies the challenges that bicyclists face on campus.

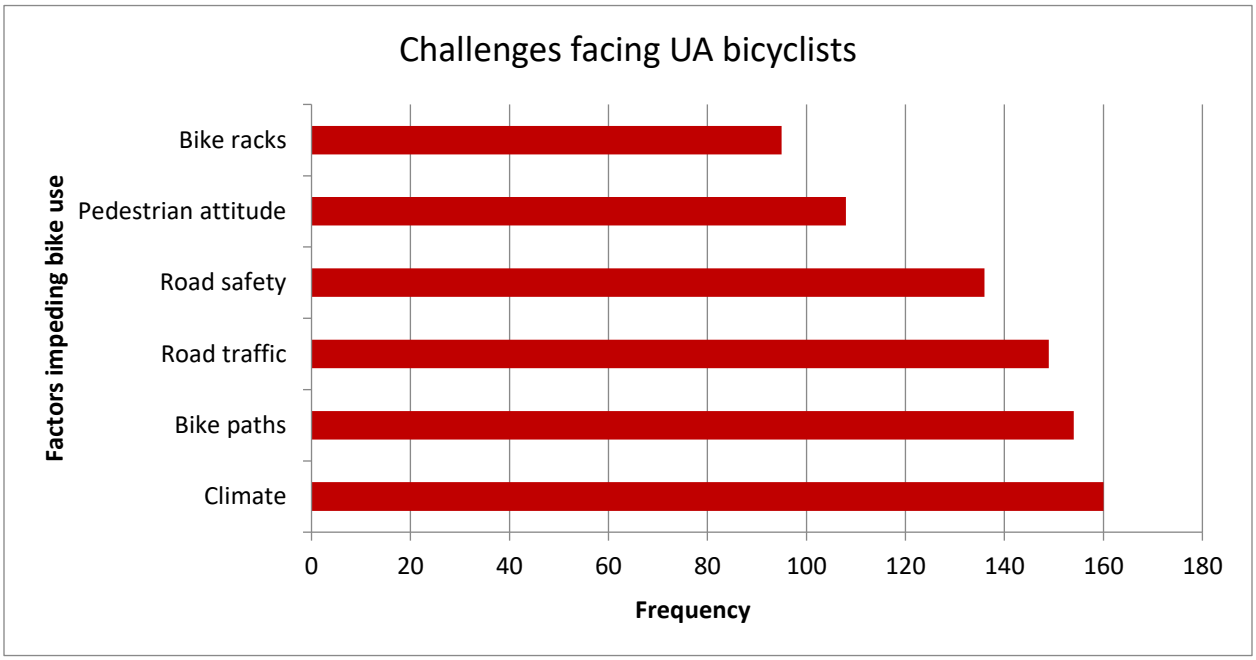


Figure 13 Challenges facing bicyclists on UA campus

Improvement in the bicycle infrastructure on campus is of most concern to bicyclists on campus. 70% of respondents raised concerns about the lack of connecting bike racks between the city and the campus. 25% believe the use of bike paths by other road users such as pedestrians and drivers prevent them from fully utilizing their bikes. As such, it is expected that with a bike share system, more bike paths would be provided especially on the major roads like Hackberry Lane, and existing ones enhanced to ensure safe riding to and from campus. About 5% of respondents expect that road signs will be put up across campus to make drivers and pedestrians aware of increase of bicyclists on campus to prevent road crashes and collisions.

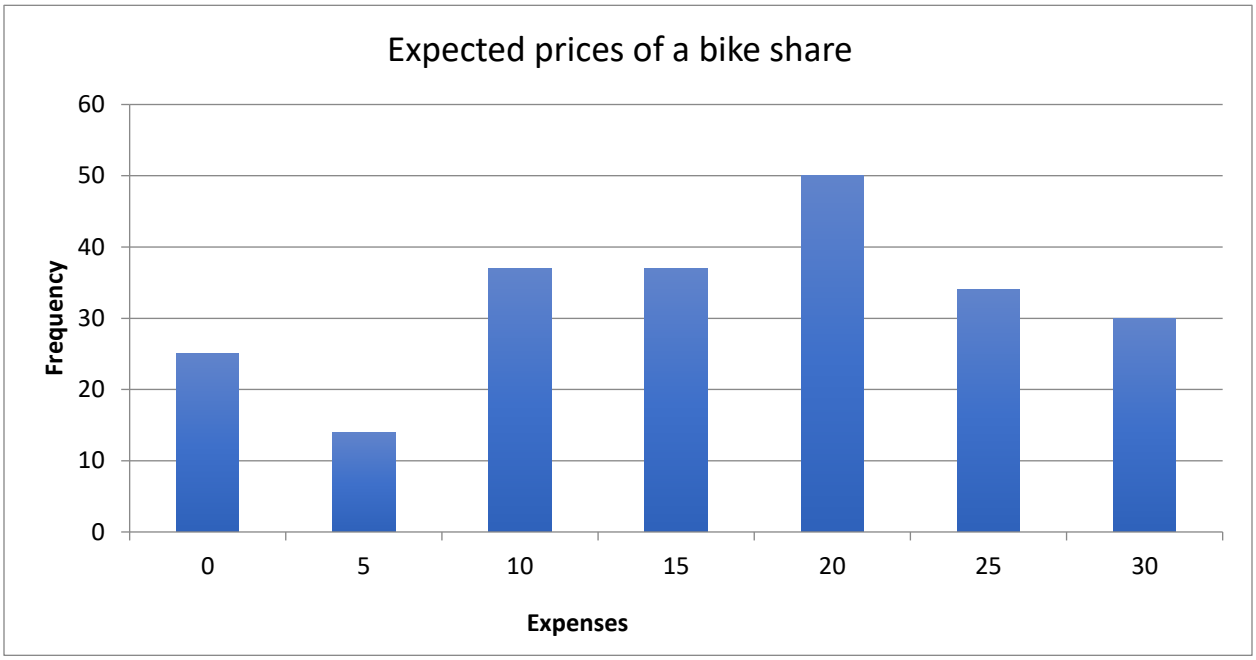
As traffic congestion is one of the factors that influence bicycle use on campus, there is the need to reduce the use of personal vehicles on campus. Bike share is believed to have the ability to provide alternative transportation option to the campus community. As such, it is expected that with a bike share on campus, the use of personal vehicles will reduce, and bike use

will increase. With a bike share, the campus community also expect free movement around campus to increase their efficiency. Having rental bikes on campus according to 46% of respondents, will push the campus community from driving to and from campus all the time. 'I want cars to be essentially eliminated from campus. I truly believe that the casual usage of automobiles is (in most cases) irresponsible, unhealthy, bad for the environment, illogical, and culturally devastating', says a respondent.

To find out why respondents would want to use a campus bike share, 40% of respondents are of the view that a bike share program should be an attractive transport system to the entire campus community, especially those who do not want to deal with the hassle of maintenance, storage and safety for their personal bikes, as well as those who do not currently use bike on campus. To quote one respondent, "it would be convenient for out of state students who may not be able to transport their own bikes to campus if they are flying or driving long distances". Another points out that, "I live off campus, but it would be useful if I can get around campus easily".

Also, on why respondents would want to use a bike share program, 20% expect that a bike share will help the campus populace reach areas on campus they previously couldn't with their cars and also help them reach bus stops on campus. To quote a respondent, 'it's often difficult to bike from my home to campus, but a bike share program should allow me to get to places on campus faster and allow me ride a bike on campus without bringing one from my home'. Again, a campus bike sharing program is expected to enable greater access to more areas on campus and reduce trip times from walking or driving.

Again, 40% respondents are concerned about the operating cost of a campus bike share. According to a respondent, “everything operated by the university is expensive”. This means people with the idea are not likely to use a bike share program implemented by the university. To ensure the use of a bike share on campus, 40% of respondents believe the program should be cheap and affordable for students. 30% agree to using a bike share on campus if the cost does not



exceed the cost of acquiring their own bikes whiles 20% say they will use a campus bike share if it was free. *Figure 14* shows the amount respondents are willing to use a bike share program.

Figure 14 Per semester expected prices of a bike share

As mentioned earlier, some respondents do not want to use a bike share program on campus because they believe it will increase their campus expenses. As such, it can be seen from *figure 14* that respondents are not willing to pay a higher price to use a campus bike share program. It is therefore expected that an affordable bike share program will be implemented on

campus to enable the campus community to utilize it. According to a respondent, a bike share program will be attractive to use if it has affordable prices and it's easy to access.

Majority of respondents (80%) are of the view that bike stations should be allocated at areas that will be easily accessible on campus, especially at libraries ,residential halls, parking lots, bus stops, dining and lecture halls. Locating bike stations at libraries was the most (80%) ranked preferred location by respondents, with the student health and recreational centers being the least (2%) ranked location for bike stations. These respondents believe that locating bike stations at these preferred campus locations will ensure maximum use of bikes and stations and reduce impedance to bike stations. *Figure 15* shows location rankings for bike stations on campus.

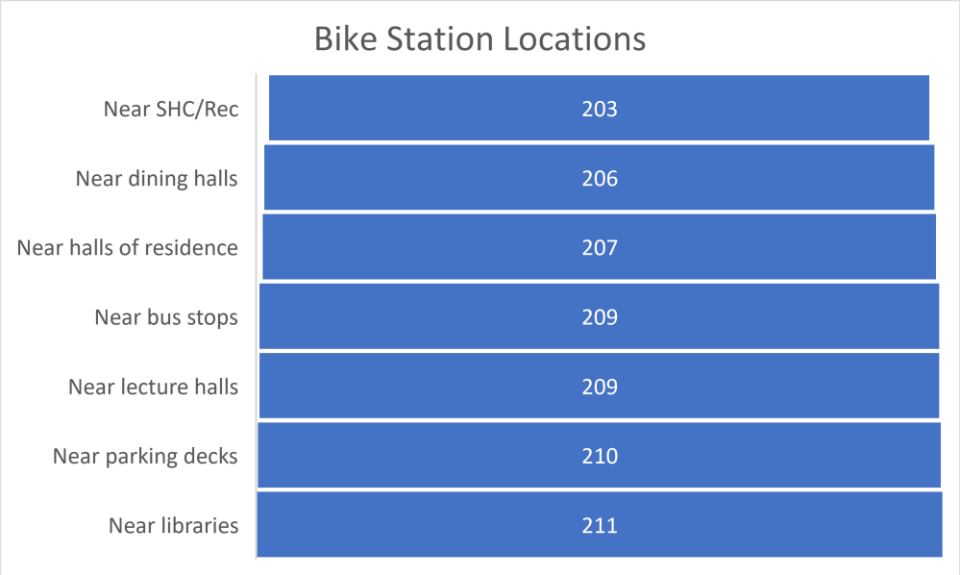


Figure 15 Expected location of Bike stations

These stations are generally the most accessible areas on campus. Locating bike stations at these areas on campus is expected to influence the potential use of a campus bike share.

Having bike stations at these preferred locations would also ensure frequent use of bike stations and bikes/scooters provided. About 20% of respondents also believe having stations at these opened locations will ensure the security of the bike stations and the bikes/scooters provided.

A campus bike share program is expected to have efficient and varying bike and scooter types. 60% of respondents believe that the program shouldn't be limited to only bikes but then users should be provided with alternatives such as scooters. It is expected that these varying devices will attract a greater number of the campus community especially, the bicycle unfriendly. Providing varying bike/scooter types is also expected to provide varying services to the campus community and to ensure that the needs of the people are catered for. *figure 16* shows the preferred bike/scooter types of respondents.

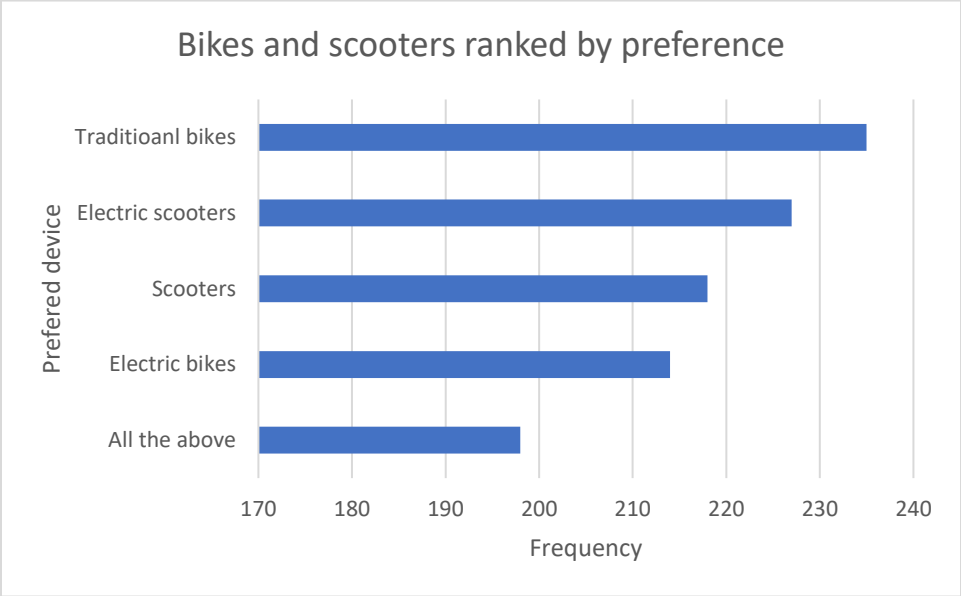


Figure 16 Preferred bike/scooter types

Ranking preferred bikes and scooters for a bike share program, traditional bikes were ranked as the most preferred with 98%, electric (kick) scooters were the second most preferred

device with 95% ranking, traditional scooters came third with 91% ranking, whiles electric bikes were the least preferred with 89% ranking. However, 81% of the respondents agreed to using all the above ranked devices if they are provided.

There are some features that respondents identified would interest them most to use a bike sharing program on campus. Having a high number of bikes available at decks was the most choice of respondents. Flexibility to return bikes to any bike station, multiple bike decks/ stations, affordability, flexible membership options, long term rental, tracking devices on bikes/scooters and being able to reserve bikes with a phone or computer also came up as the major features expected with a bike share program. *Figure 17* shows features of a bike share program that will attract users.

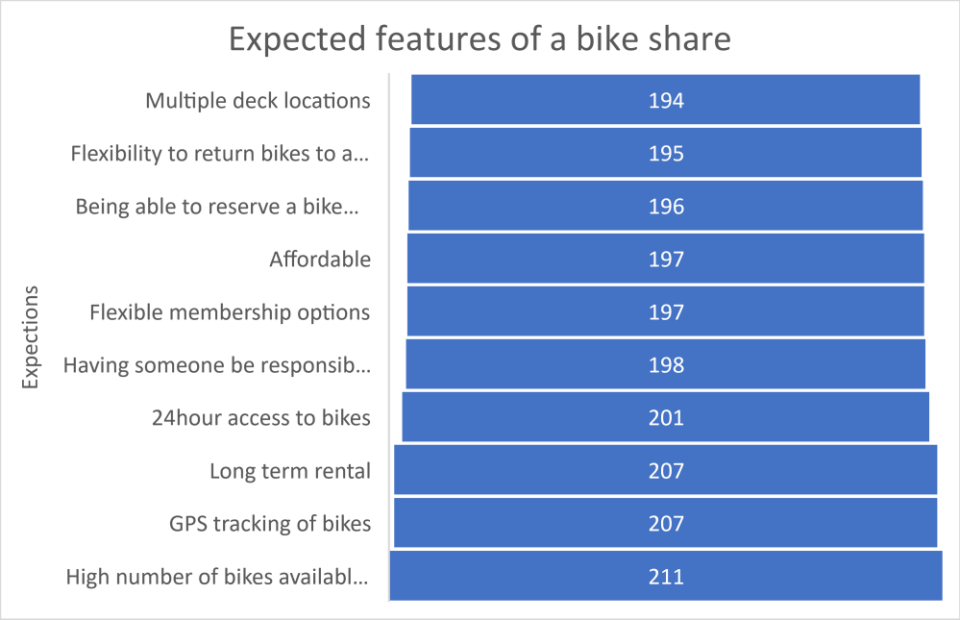


Figure 17 Expected features of a bike share program on campus

The feature that was identified to attract potential users the most is having a higher number of bikes to serve the people. According to one respondent, students will misuse and

misplace bikes if there are no securities and so it will be better to equip bikes with GPS to track where they are ridden to and also know how they are being used. Having someone responsible for bike maintenance to some respondents (30%) will not only attract them but rather attract the campus populace who do not current use bicycles on campus especially the type that are from out of state and do not want to travel far with their personal bikes.

On the issue of who is to operate a bike share on campus, majority of respondents (32.57%) expect a joint operation by the Transportation services and the Student REC Center (SREC). According to these respondents, the Transportation services department knows the transport needs of the campus community since it manages campus transportation whiles the SREC with its current 'Bama Bikes" has ideas about bike rentals , hence with these two together a bike share program can be successfully operated on campus. However, about 15.14% believe that the transportation services department alone should not operate a bike share program since most of the services (parking fees) they provide are expensive, whiles 16.97% believe the SREC alone does not have enough information on the transportation needs of the people to operate a bike share.

Again, some respondents (15.60%) believe that a private investor though will provide the necessary infrastructure needed to operate a bike share program, the investor may impose conditions for use on the campus community that may influence the use of a bike share on campus. To quote a respondent, 'if it's run by a campus organization, they will know the students' needs better than a private company. They would also hopefully be cheaper'. A partnership according to 19.72% of respondents would give the private partnership the upper hand in decision making. These respondents believe that the University may not be able to implement an affordable and well maintained bike share program without third party support.

According to a respondent, ‘partnership between school and local government and a private entity would have the only chance of accomplishing the true goal of bike share’. *Figure 18* shows who respondents want to operate a campus bike share program.

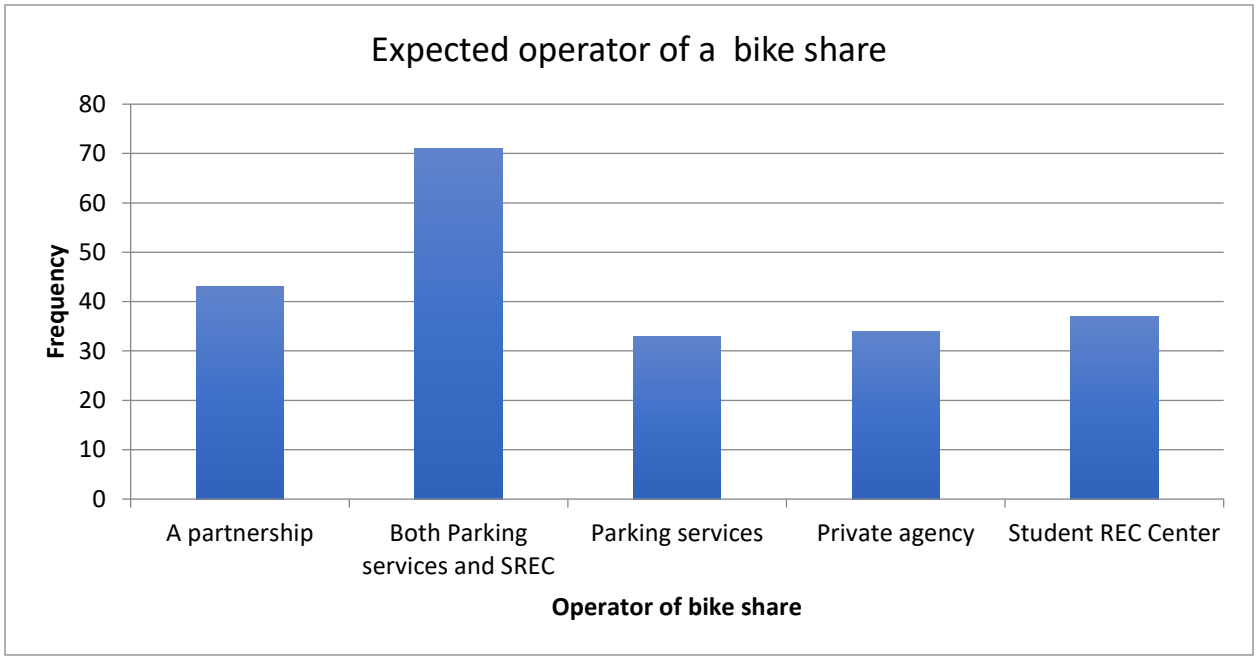


Figure 18 Expected operator of a bike share on campus

3.5 Policy Recommendations

This section of the study summarizes the study findings to make policy recommendations for University of Alabama’s bike share program. The major findings of the study are, current bike challenges, affordable pricing, bike stations allocation, easy accessibility of bike stations and bikes/scooters, operation of the campus bike share program and security of bikes and bike stations. The policy recommendations discussed are therefore based on the major findings of the study and lessons from the case study of the three campus bike share programs.

Bicycle infrastructure is crucial to the planning and implementation of a bike share program. Adding more bike lanes to the road network on campus would enhance bicycle use and prevent bicyclists from riding with traffic. This will ensure the safety of riders especially during rush hours. Also, the existing bike infrastructure should be improved to better serve the bike share program. Bike lanes along 6th Ave and the Gorgas lane are observed to be used by university vehicles and pedestrians more than bicyclists. This poses threat to the riders and other road users as they compete to use the lanes. The Transportation Services should ensure that these lanes are made available to riders to avoid road crashes and conflicts.

The climatic conditions in the city and campus may affect the effective use of a campus bike share program, as it is currently a current to bicyclists. There are some respondents who emphasize less use of their bikes during the cold and rainy seasons. As such, the rate of use of a campus bike share program will be less as compared to other seasons where bicyclists are very active. Stakeholders should therefore factor the climate on campus into the planning process.

Looking at the three generations and campus bike share programs, it was realized that self-funding a bike share program is likely to face some financial constraints, as was the case of University of South Florida's Share-A-Bull campus bike share. If university stakeholders want to fund the program solely, then they can expand the 'Bama Bikes' initiative to make it a bike library system as done at the University of Kentucky. This will reduce the set-up and operating costs for a bike share program, thereby making it affordable to the campus populace. The university can also look for other funding sources such as partnership or government/individual grants to implement the program on campus.

A partnership as done with the Auburn's War Eagle campus bike share will help reduce the capital and operating costs. However, with this type of funding, major decisions like pricing, number of bike stations and bikes/scooters will be largely determined by the private investor. Decisions not in favor of the campus populace may affect the use of the bike share program. On the other, the university may send proposals to state government agencies as well as private corporations for grants to aid in the establishment of the bike share on campus. This option will both reduce the university spending and make the program affordable to the campus community.

Having a privately-owned bike share program on campus may discourage students from using it. Many of the respondents believe that a privately operated program may be too expensive for students to afford. With this, it is recommended that a university operated program be implemented with a third party investor to encourage students especially, to use the bike share. A university implemented program would also encourage users to report problems and challenges they encounter. This will help increase communication between users and stakeholders and ensure successful operation of the program.

The locations that are of most concern to this study are; libraries, residential halls, parking decks, bus stops, dining and lecture halls, the student health center and the student recreational center. These locations should be considered for the allocation of bike stations as they are the most accessed areas on campus. How far bike stations are placed form these locations will determine how well the campus community will participate in bike sharing. Allocating bike stations in areas that are currently not accessible by bike and on steep slopes will affect the accessibility and use of bike stations and bikes/scooters.

Technology over the years has become a crucial part of the bike sharing system. In view of that, the university may want to go for a more technologically advanced bike sharing program. Having automated bike stations where users can access bikes without reserving bikes will encourage high demand and increase accessibility. The manual system requires recruiting staff or students to manage the daily operation of the bike share system and may add to the operating cost of the program. Though this system is less expensive, there is no guarantee for the safety of bikes/scooters and bike stations. Equipping bikes/scooters with technology such as the GPS will ensure the security and protection of both bike stations and bicycles/scooters. These technologies should also be linked to a single server that keeps track of members and the bikes/scooters.

Improper use, abandonment and neglect are major contributing factors to the failure of bike share programs, especially with manual or first generation and second generation systems. Educating the campus community on how to carefully use and properly secure bikes/scooters in stations will prevent these issues. With time, as the people get used to the system these problems may decrease or stop. It is also important that campus security personnel are made aware of such events to ensure greater protection of stations and bikes/scooters.

Through the survey, it was realized that about 20% of respondents did not know what a bike share is or and how it operates when they were asked why they would or would not use a bike share on campus. As such, the Transportation Service directorate should make efforts to educate the campus community on what the program is, how it will operate and how it can be used. Students should be made aware of the fact that they will not be sharing their private bikes (5 respondents were skeptical about that) but rather will have access to bikes provided for public use. Educating the campus on the environmental, financial, health and improved transportation

benefits of a bike share program will also make the program more attractive to the campus community.

Marketing the bike share program to the University of Alabama community is crucial in the periods leading to and after the implementation of the program. As stated before, 20% of the survey respondents had little or no knowledge on the bike share system. These respondents believe with a bike share program they would have to share their personal bikes with others. Advertising the program before implementation will provide information to the campus populace and help them understand how the program will be operated. Advertising before implementation will encourage the people to utilize the program.

The student governing body and societal organizations can be used to market and promote the bike share program to the campus community. Advertisement should emphasize the benefits of bike sharing to the campus and the community at large. Students can be involved in the planning process by granting them opportunities to come up with names for the program and colors for the bikes. This is a convenient way to promote the program among students and give the campus community a sense of belonging.

4: CONCLUSION

4.1 Summary

This study was to understand how feasible a bike share program will be at the University of Alabama. At this point, it seems unlikely the program will succeed with the current bike infrastructure, driver attitudes and personal transportation preference of the campus community. Bicycle use on campus is a modal choice of transportation by a few and majority of the campus community do not intend using bicycle as a mode of transportation. However, some of these bicyclists have stopped or intend to due to the poor conditions they ride in.

Campus bike sharing in the US has increased over the years due to improved technology and effective planning. For a successful program however, stakeholders have to sufficiently plan and study the needs of the campus community. Bike share seems like a good transport alternative at the University of Alabama due to the increasing campus population and transportation problems. A case study of existing campus bike share programs points out the environmental, financial, health and transportation benefits of the bike share program to college campuses.

Many bike share systems have evolved over the years with different users options and technology. The first generation bike share system provided free bicycles to communities and societies. However, this system did not survive due to theft and vandalism from the local people. The second generation show the introduction of locking and coin deposit systems. Though it was successful and still in operation in some parts of the world, this system requires manual operations and locking of bikes at a designated bike station. The third generation bike share

which is the most widely used in the US and other parts of the world is the most advanced in terms of technology. It requires fewer human efforts in its operation. The third generation bike shares come with electric bikes and scooters giving users more rider options.

There are two main types of the third generation bike sharing system currently being operated across the world. The bike library and the distributed bike shares. The bike library is a centralized system where bikes are publicly made available at a staffed location. The system offers different bikes for different purposes to riders. The system is not heavily technological and it's cheap. The distributed system on the other hand, offers several station options to riders. There is high technology use associated with this system. There are three forms of the distributed bike share; the Ad-hoc system that has free bike use with no management, the Kiosk or Tech-on-station system that offers automated station bike use, and the Tech-on-bike system that has rental and unlocking technologies on the bikes. Having a tech-on-bike distributed bike share will be appropriate for the university campus. This will help prevent theft and vandalism as well as ensure monitoring of the use of bikes/scooters.

The University of Alabama has the opportunity to increase its transportation alternatives that are environmentally friendly and healthy for the campus community. Though expensive, the university has several funding options that will reduce the capital and operational costs of a bike share. The university can solely bring in the program and sustain it through revenue mobilized from users. The university can also partner with private bicycle investors to implement the program on campus. However, this option may take major decision making rights from the university officials. Government and individual grants to the university may also help bring the program to campus. This will require sending out proposals to state and individual agencies to solicit for financial support.

There are hopes that with a bike share, the campus transportation service will put in place some measures that will safeguard bicycle use on campus. With concerns about the poor bicycle infrastructure, it is expected that more bike lanes will be provided whiles existing ones are improved upon. It is also expected that, other road users (drivers and pedestrians) will be encouraged to respect riders on the road. Concerns were raised about the use of bike lanes by both drivers and pedestrians that hinder bicycle use on campus. With the different socio-economic background of the campus community, many expect that a bike share program will either be free or cheap to use. This means that, the student population of the university should be considered when pricing the use of the bike share program. A student friendly program will contribute to its successful operation.

Allocating bike stations at areas on campus that are mostly accessed such as libraries, residential halls, parking lots and bus stops will encourage the use of a bike share program on campus. To ensure the security of bike stations and bikes/ scooters, it is important that stations/bikes are equipped with tracking devices such as GPS to prevent theft and vandalism. A university operated bike share program on campus is more likely to be used by students that a privately operated program. A university operated program is considered more affordable than a private operation. Campus education and marketing will make the campus community aware of the intended bike share program and encourage demand for it.

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APPENDIX A: SURVEY QUESTIONNAIRE

1. How often do you ride the bicycle on camps?

a. Daily
b. A few times a week
c. A few times a month
d. A few times a year
e. Never

2. What factors impede bicycle use on UA campus?

a. Climate
b. Bike paths
c. Road safety
d. Bike racks
e. Road traffic
f. Pedestrian attitude

2b. What do you think should be done to improve bicycle use on campus?

3. If a bike share system was available at UA, would you use it?

a. Yes
b. No
c. Unsure

3b. Give reasons for your answer

3c. If "yes", what types of trips would you use it for? (choose all that apply)

a. Going to school
b. Shopping
c. Reaching transit stops
d. Physical Exercising
e. Recreation
f. Visiting friends and family

3d. If "yes", how often would you use it?

a. Daily

b. Once or twice a week
c. Once or twice a month
d. A couple of times a year
e. Unsure
4. Rank the following devices in terms of preference (5 highest, 1 lowest)
a. Traditional Bicycles
b. Electric bicycles
c. Scooters
d. Electric scooters
e. All the above

4b. What features would you want to see on the device you chose for the question above?
a. Lock and chain
b. Basket and adjustment seat
c. Safety bells
d. Reflective strips
e. Front and rare automatic lights

4c. Would you use a helmet with the device?
a. Yes
b. No
c. Maybe

4d. Why?
a. For safety
b. It's uncomfortable
c. It's expensive
d. It's a requirement

5. Which of the following features would interest you most to choose a bike sharing program, besides your answer for Q4?
a. Flexibility to return bikes to any location
b. Multiple deck locations
c. Having someone be responsible for maintenance
d. Cost-effectiveness
e. Being able to reserve a bike with a phone or computer
f. Flexible membership options
g. 24hour access to bikes
h. Long term rental
i. GPS tracking of bikes
j. High number of bikes available at decks

6. How much will you be willing to pay per semester to use a bike share on campus?
a. $0
b. $5
c. $10
d. $15
e. $20
f. $25
g. $30 or more

7. Rank the following locations for bicycle pick up and drop off (7 highest, 1 lowest)
a. Near halls of residence
b. Near bus stops
c. Near parking decks
d. Near SHC/Rec
e. Near lecture halls
f. Near dining halls
g. Near libraries

8. Do you think UA needs a Bike share Program?
a. Yes
b. No
c. Maybe

8b. Why?

a. To improve traffic
b. To reduce parking problems
c. To enhance movement on campus
d. To supplement the transit system on campus
e. For recreation
f. For health benefits
g. Will increase campus expenses
h. Will make campus crowded

9. Who would you like to run a bike share program on campus?
a. Parking Services
b. SREC
c. Private Agency
d. Both Parking Services and SREC

9b. Give reasons why:

10. What will make bike sharing more appealing to you?

11. What is your gender?
a. Male
b. Female
c. Prefer not to disclose

12. What is your age court?
a. 18-25
b. 26-33
c. 34-41
d. 42-49
e. 50 and above

13. What is your status on campus?
a. Student
b. Postdoc
c. Faculty
d. Staff

14. What is your residential status?
a. On-campus
b. Off-campus
c. Commuter

15. What is your major mode of transportation?
d. Personal car
e. Transit
f. Carpool
g. Walk
h. Bicycle

APPENDIX B: IRB CERTIFICATE

ALABAMA I Research & Economic Development Office of the Vice President for
Office for Research Compliance

December 18, 2018

Judith Oppong
Department of Geography
The University of Alabama
Box 870322

Re: IRB # EX-18-CM-113: "A Feasibility Study of a Bike Share Program (B.S.P.) on the University of Alabama (U.A.) Campus"

Dear Ms. Oppong,

The University of Alabama Institutional Review Board has granted approval for your proposed research. Your application has been given exempt approval per 45 CFR part 46.101(b)(2) as outlined below:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects ‘financial standing, employability, or reputation,

This approval will expire on December 17, 2019. If the study continues beyond that date, please submit the Continuing Review Form within e-Protocol. If you modify the application, please submit the Amendment Form. Changes to this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please submit the Final Report Form. Please use the IRB-approved consent form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB approval number. Good luck with your research.

Sincerely,

cc: Dr. Seth Appiah-Opoku

358 Rose Administration Building I Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

Informed Consent for Study Participants (Survey Respondents)

You are invited to participate a research study conducted by Judith Ntow Oppong from the University of Alabama. The study is about the feasibility of a Bike Share Program at the University of Alabama. I wish to sample views from the campus community on the bike needs on campus. To be able to do this, I am carrying out a survey, which will involve the entire campus community (faculty, staff and students) of the University of Alabama. You were selected as a possible participant because of your affiliation with the university.

Participation is completely voluntary. If you decide to participate, you will be asked to take a brief survey that covers your opinion of bike sharing. None of these questions will ask you about personal matters and your answers will be kept confidential and the process will take a few minutes. Choosing to participate in this study will not benefit you personally. The only descriptive information collected are; age, sex, mode of transportation and educational attainment.

Whether or not you participate is entirely your choice and if you choose not to participate, no penalties will occur. You are also free to discontinue any time during the survey process without penalty. There is no risk associated with participating in this research, however you can still choose not to participate. The survey will take 5-10 minutes to complete and you may not return to change a response after submitting it.

If you have any questions or concerns, please do not hesitate to contact me at 205-657-9240 or via email at inoppong@crimson.ua.edu. My advisor Dr. Seth Appiah-Opoku, may be reached at 205-348-2278 or via email at sappiah@ua.edu. If you have any questions, concerns, or complaints about your rights as a participant in this study, you may contact Ms. Tanta Myles, the Research Compliance Officer at UA, at 205-348-8461 or toll-free at 1-800-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach Website at http://ovpred.ua.edu/research-compliance/prco/. You may email the outreach Compliance Office at rscompliance@research.ua.edu.

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 12/18/201
EXPIRATION DATE: 12/17/2019