

**BARRIER TO MOBILE APPLICATION ADOPTION WITHIN  
SMALL RURAL BRICK AND MORTAR BUSINESSES**

Matthew Frazier

Angela Walters, Faculty Mentor and Associate Professor of Informatics

Sharon Wilson, Faculty Mentor and Instructor of English

Linda Smith, Faculty Mentor and Instructor of English

Fort Hays State University

May 2018

**Table of Contents**

Supplementary Materials .....	IV
Letter of Transmittal .....	IV
Abstract .....	V
Introduction .....	1
Data Gathered .....	3
Literature Review.....	3
User Behavior .....	3
Building Relationships .....	3
Mobile Usage .....	5
Development and Adoption .....	6
Methodology .....	7
Interview Selection Process .....	7
Google Form Questions .....	7
Interviews .....	9
Interview Questions .....	9
Dataset .....	10
Conclusion .....	11
Recommendations .....	13
References .....	14
Process .....	16
Abstract .....	16

Progress Report ..... 17

Research Proposal ..... 19

**Supplementary Materials**Letter or Transmittal

0 Wooster Place  
Apartment E-2  
Hays, KS 67601

9 April 2018

Professor Sharon Wilson  
Director of Teacher Education  
English Department  
Fort Hays State University  
600 Park Street  
Hays, KS 67601

Dear Professor Wilson:

I am submitting this study entitled Barrier to Mobile Application Adoption within Small Rural Brick and Mortar Businesses to examine the reasoning of why rural businesses are not adapting to mobile web applications. A large percentage of local business websites in rural areas do not utilize mobile website design in a day and age when roughly 67% of rural American adults own a smartphone. This study will determine the cause of this problem, and by knowing the cause, action can be taken to help these businesses retain and acquire new customers.

As a information technology major with an emphasis in web development, this problem is very sincere to me. I feel as a young professional who will be entering the field, I must share my knowledge to those who do not know. If the businesses have not adapted to mobile applications due to lack of interest, I hope I can show how detrimental the lack of mobile applications can be on a business. To conduct this study, I will be interviewing various businesses across Ellis county who either do or do not currently have a mobile application. The interviews will find why a business has not adopted, or how adopting has helped their business. The interview questions will be developed by both myself and professor Walters of the informatics department at Fort Hays State University. Professor Walters has been a tremendous aid in this research by guiding me in the direction to find library materials, and solidifying this topic. I look forward to finishing this research, and hope to have the possibility to present this at an upcoming conference.

As the current state of my progress, I have completed an abstract, a progress report and a research proposal. I am currently in the process of gathering library research to write a literary analysis. I trust my work thus far has shown my dedication to this research, however, if you have any questions regarding my research, they may be directed in my direction by either contacting me via email ([matt@frazierhome.net](mailto:matt@frazierhome.net)), or phone (719 447 5773, afternoons or evenings, Monday through Friday). I thank you for you time and look forward to presenting my final study to you.

Very respectfully,

Matthew Frazier

**Abstract**

This paper will discuss the barrier of mobile application adoption in small businesses within rural areas. Many small and medium enterprises (SMEs) in the Ellis county are not mobile ready, therefore losing business and clients. There are four main reasons why local business have not become mobile ready: funding, education, lack of knowledge and lack of care. With mobile applications, there is a communication built between the users and the business that is vital to the growth of the business. There needs to be action taken, whether from the customer side, or the webmaster side to help small businesses in rural areas grow and adapt to current technology. Interviews have not been conducted in this feasibility study, but the next step is to interview twenty SME in Ellis county to acquire the specifics of why they have not become mobile ready.

## **Introduction**

Mobile technology has grown rapidly over the past decade. A large percentage of local business websites in rural areas do not utilize mobile website design in a day and age when roughly 67% of rural American adults own a smartphone. When a user navigates to a web page that is not mobile friendly, they become frustrated at the lack of usability. This lack of usability costs the company customers and profit. In an ever evolving world of technology, businesses must keep up to times to retain customers.

Mobile websites have evolved from a text based page, to a page filled with rich content. The main purpose of a mobile application is to allow users the increased usability of a website. There is a focus on retaining all the same information on mobile websites compared to the desktop site. Because there is an increase of Americans that are adopting cell phones, many of these people use their device to gather information quickly about new businesses. When a website does not have a mobile friendly application, there is a severe lack of usability that results in frustration for the customer.

A solution is needed to determine why rural brick and mortar businesses in rural areas are not adapting to mobile friendly websites. Whether the reasoning may be education, funding or lack of interest, a change is needed. The purpose of this study is to determine the feasibility of why there is a barrier to mobile application adoption within small rural brick and mortar businesses.

As the topic of mobile application adoption is generally very broad, there are a different limitations that I will consider. Although we will be conducting interviews and gathering recommendations, I will not be pushing the results on the businesses interviewed. In addition, we

will not be conducting interviews in all rural areas, rather those focused in the Ellis county area.

When conducting the research we will not be held responsible for creating mobile applications for the interviewed businesses, nor the blame of not informing the business of this problem earlier.

The scope of this paper will cover all sides of SME businesses who are not mobile ready. This paper will not find the effect of not being mobile ready, as that will be a future study.

## **Data Gathered**

### Literature Review

In this section, we review the work in four key areas. We focus on the users and relationships they need with mobile websites.

### User Behavior

As a business adapts to mobile technology, their customers become their users. All users are different but generally follow similar patterns. Technology aside, the spending habits across separate demographics such as age, gender, education and working style all share patterns, however there are separate social bridges that are also considered. A social bridge such as a individuals who reside in separate areas, but work nearby each other. Social bridges create a stronger similarity in their purchases compared to the traditional demographic factors (DONG, et al., 2017). Moving into mobile applications, it is well known that any app that is well-adopted is expected to receive more downloads or higher rankings and reviews (LU, et al., 2017). With mobile phones becoming indispensable, many applications allow a personalized feel that aid our daily activities. Many applications allow data to be gathered from the user with interaction and surrounding context (MEHROTRA, et al., 2017). From the data gatherings from Mehrotra, communication applications ranked highest in usage, only with lifestyle passing during sleep hours. Users are most responsive at colleges, libraries, and while on the streets. Users are less receptive to notifications in natural areas compared to urban areas. The most notable finding was that users are more attentive to notifications in “productive” areas (MEHROTRA, et al., 2017).

### Building Relationships



Relationships are key to develop and organize business with users. Positivity is one strategy that businesses follow, as it is conceptualized as “attempts to make interactions pleasant” (Ki & Hon, 2006). When a business practices positivity, the practice directly correlates to the principle “Be Unconditionally Constructive” (Ki & Hon, 2006). Business also follow the practice of allowing access. Users can reach leaders in the organization if information is posted. Likewise, access can be reached through feedback through message boards or online surveys. (Ki & Hon, 2006).

Dialogue can be viewed as a useful framework for viewing the public-organization relationship. Websites have greatly achieved this effort for nonprofit organizations and activists. In a sense, websites can act as the middle-man between “powerful organizations,” and “powerless individuals.” Websites essentially act as an equalizer for the two groups. The web offers a path that is unobstructed between the organization and public (Taylor, Kent, & White, 2001).

Many businesses are still viewing the internet as a one-to-many medium. Businesses still see this medium as technology prior, such as newspaper, radio or television. The key difference between is interactivity. To have a relationship built, business must exploit this capability. When a website exploits this potential, it allows users to feel connected, with a greater chance of repeating that visitation. In terms of tourism websites, tourists are in a constant search for a personalized response either physically, social or emotionally to their needs. Because of the lack of content, interactivity and promotional value, rural tourism spots are being forgotten as a primary destination. Their websites do not have the drawing power as more urban area (Cai & Beldona, 2006).

Philip Alford and Stephen John Page note that small and medium enterprises (SME) which have a web presence develop grow at twice the rate at which a SME with little or no presence grow. With online marketing, it allows the business to measure the interactions of customers more accurately. There is currently a gap in which the relationships are being built. With the SME in the UK, Alford and Page state the causation is the lack of social media sites, and lack of use of free to low-cost applications. In the current web era, conversations are needed to keep communication with customers, many of the SMEs failed to implement this concept. The other aspect is lack of knowledge. The lack of understanding of technology greatly affected the company. These companies were aware of the importance, and were challenged as customers would challenge them (Alford & Page, 2015).

### Mobile Usage

With smartphones and tablet computers being ubiquitous in today's society, many are the subject of "handset-based" studies which analyze interaction and usage. Smartphones and tablets offer similar technology capabilities. The main difference between the two technologies is the screen size. It has also been found that smartphones are being used almost three times more than tablet computers. 19% of smartphone interaction happens at the office, while 27% at home. However, the average time unlocked on a smartphone is 307 seconds, where a tablet is 963 seconds. With this information, the daily usage average is not far apart from each other (HINTZE, HINTZE, FINDLING, & MAYRHOFER, 2017).

In October 2012, the researchers at the Pew Research Center's Project for Excellence found that 17% of users primarily use their cell phones for online browsing compared to computers or other devices (McCorkindale & Morgoch, 2013). According to Tina McCorkindale

and Meredith Morgoch, companies must start a basis with the “five principles of dialogic theory;” verify their mobile provide a user friendly, and easy to use interface; allow users to return to the site; and engage in communication between the user and the company. Google found in 2012, 61% of respondents reported if the mobile site did not offer what they were looking for immediately, they would leave (McCorkindale & Morgoch, 2013).

### Development and Adoption

Whenever a user downloads an application, they have a specific task. Whether that be enjoy a game, or keep reminders in a calendar, users are looking for completion. Some tasks are achieved by downloading a few different applications with similar styles in a exploratory behavior style. Different people have different exploratory behavior styles. In addition, different applications use different methods to stimulate thought in these users. Most notably that are used are unexpectedness, uncertainty, arousal and ambiguity. For an application to have a higher success chance, it will need a key determining factor as discussed (LIU & HE, 2017).

Very few apps make it as a “killer app,” therefore determining the success of an application can be varied. Success can be determined by the end user, business, domain experts and project managers. For many developers, the key value they look for is the success of adoption by end users. Developers want to know how well and why their app is being adopted (LU, et al., 2017).

For online tourism websites, there are three key factors that determine stickiness: content, interactivity and promotional value. Each of the three are vial to the performance and effectiveness of websites. Many websites score high within the content section, as many pages offer content that the user desires. The issues comes to when interactivity and promotional value are factored in. Srikanth Beldona and Liping Cai find that holistically, content focus websites

take 64% of all, while interactivity and promotional value follow at 19% and 17% respectively (Cai & Beldona, 2006). Beldona and Liping also state that rural tourism spots need to adjust their model and adapt to more sites that integrate the interactivity and promotional value factors. By creating websites that meet all three criteria, a website is created to meet the needs of the consumers allowing more business in rural areas (Cai & Beldona, 2006).

## **Methodology**

In this section we present our approach for determining a causation of why rural brick and mortar businesses have not adapted to mobile readiness. Our focus on this research is to show the value of technologies and engaging current customers while also bringing in new customers. This research study is qualitative and explores a nature to create a new understanding of a common problem in rural areas.

### Interview Selection Process

Interviews will be conducted between a range of business in the Ellis county area. Our focus on businesses is to limited to small and medium-sized businesses (SMEs). Businesses will be gathered from chamberofcommerce.com. The selection process is not random, as the businesses are chosen to reflect the needs of the study. The study requires the business to have technology to promote their business, but not a mobile application. The selected businesses will be sent an online survey though Google forms to acquire more information on their mobile readiness. There is no compensation given for completing the surveys.

### Google Form Questions

1. Business Name

2. Your name
3. Your Email
4. What is your type of business?
  1. Retail
  2. Insurance
  3. Pharmacy
  4. Food Industry
  5. Media
  6. Education
  7. Other
5. What technologies have you currently implemented for your business?
  1. Facebook
  2. Twitter
  3. Instagram
  4. YouTube
  5. Website
  6. Mobile Friendly Website
  7. Mobile Application
  8. None
  9. Other
6. Do you have knowledge in mobile applications for business?
7. Are you aware of how to create a mobile application for your business?

8. Are you aware of how to implement a mobile application for your business?

Rank from 1 to 5. 1 being the least likely/no value, 5 being vital importance/most likely.

9. What is the value of a mobile application to your business?

10. Chance you will adopt a mobile application for your business?

11. Would you be open to an interview to further discuss mobile readiness and your business?

12. If yes, what is the best form of contact?

### Interviews

Twenty businesses will be selected from the initial group of surveys. Interviews will be held with either the manager of the company, or their web master. A series of questions will determine the causation on why the specific business has not integrated mobile technology, and their awareness of the issue. We will also bring the value of current mobile technologies and the ease to adopt to allow businesses to determine ease of adaptability. We will also bring the value of reaching new customers with the interview process. During the interview, there will be a voice recorder to ensure direct quotes from the businesses. There is no compensation for the interviewees.

### Interview Questions

1. Your Name
2. Name of your business
3. Address of business
4. What technologies have you currently implemented for your business?
5. What value has each technology benefited your business?
6. What technologies do you wish your business currently had?

7. What value would these add to your business?
8. Reflect on your customer journey, what are some touchpoint with customers that can be improved by a mobile application?
9. Does your business have a webmaster?
10. Have you adopted to mobile friendly websites/applications?
11. If no, why not?
12. What would your business benefit from a becoming mobile ready?
13. How would your customers/clients perceive your business if you became mobile ready?
14. How will this benefit the customers?
15. How do current customers view your business without being mobile ready?
16. Do you know the process of becoming mobile ready?

#### Dataset

We will analyze this data gathered from the 20 businesses in a qualitative method. We will analyze the personal reports from the different businesses, and gather a conclusion of the main causation of the barrier to adopt mobile ready sites. There will be direct quotes from the businesses to show the causation of application barrier. We will synthesize the results into a finding of how many businesses failed to adapt due to a specific reason.

## Conclusion

Due to time constraints, no interviews had taken place, however a conclusion can be reached based on the acquired data. It has been found that mobile applications are beneficial for fortune 500 businesses (McCorkindale & Morgoch, 2013). Mobile applications and websites allow for a communication between the users and the business (Alford & Page, 2015).

Comparing SMEs to large enterprises, in terms of communication, it is required at all costs. SMEs may even need more communication between customers and the business in order to grow and adapt to their client base. When a SME has a mobile application, the business is able to speak to their customers and clients without the clients actively seeking information.

In terms of adopting a mobile application, we can draw a conclusion from four different points of view. The business either does not have enough funds to hire a webmaster or create one themselves, the business does not have the education to create a mobile application, the business does not know about the current technology with mobile applications or the business does not care about the current technology. For each case scenario, the business needs to find a solution and adapt to move into the current technological era. Looking at a local business in Hays, Kansas, The Paisley Pear, the owner hired a web master who works at a local telecommunications business to run his website on the side. By hiring a third-party person, rather than a whole company to build a site, it allows this small business to have a website and a mobile website.

Another issue arises when trying to hire a third-party person to create a website. A family owned restaurant in Peyton, Colorado, Latigo Grill, uses their hired person to create a website. However, the webmaster did not create a mobile website or application. This expands



into the issue of funding, education, lack of knowledge or lack of care. If businesses are reaching out to third-parties, they need to be educated in order to ensure they receive the proper solution to their problem

Interviews were not taken as part of this feasibility study due to time constraints, and getting certified with the IRB. As mentioned in the methodology, the next steps in this project will fall to a initial screening survey to businesses who do not have a mobile application. This screening will determine if they have any current technologies such as Facebook, Twitter or YouTube. If the businesses do, they will be offered an interview to discuss their mobile readiness. Roughly twenty businesses will be interviewed with the questions in the methodology. The purpose of the interviews is to determine first hand, with a statistic of why SMEs do not adopt mobile application. The interviews will be voice recorded if allowed, and direct quotes will be used to emphasize the main points. Once the interviews have been conducted, the final paper will be submitted to a conference focusing on businesses and innovation in either the fall or spring.

**Recommendations**

From the data gathered, three recommendations can be made for SMEs. The most basic recommendation can be informing the businesses who are not mobile ready and educate on how to seek resources for a mobile application. This can be as simple as a customer reaching out to the manager or webmaster of the business and share the benefit they will receive out of a mobile application. If the individual is educated on the matter, they may also give recommendation of how to implement a mobile application. Recommendations such as giving out the names of freelancers or businesses that create mobile application, or simply free online resources like [codecademy.com](https://www.codecademy.com).

The other side to help out the local SMEs, is to suggest the freelancers or webmaster businesses to reach out to the small businesses for a consultation. If more freelancers knew how many local businesses needed a mobile application in rural areas, they would have more work, which in return would add value to the business. The most difficult aspect of maintaining a website is building, and after the website is built, maintenance is usually simple. Freelancers or web building businesses can start taking clients one at a time to balance their workload.

The final recommendation is more difficult to implement. Due to the nature of rural areas, local businesses are set, and not many new businesses start. If more freelancers out of college moved to a rural area, or even removed to a rural area, the issue of finding a way to adopt a mobile application is eliminated. For example, if a web developer resides in Salina, Kansas, or Wichita, Kansas, they can easily work with small businesses via phone calls, email or Zoom chat while commuting when necessary.

## References

- Alford, P., & Page, S. J. (2015, July 7). Marketing technology for adoption by small business. *The Service Industries Journal*, 35(11-12), 655-669.
- Cai, L. A., & Beldona, S. (2006). An Exploratory Evaluation of Rural Tourism Websites. *Journal of Convention & Event Tourism*, 8(1), 69-80.
- DONG, X., SUHARA, Y., BOZKAYA, B., SINGH, V. K., LEPRI, B., & PENTLAND, A. (2017, December). Social Bridges in Urban Purchase Behavior. *ACM Transactions on Intelligent Systems and Technology*, 9(3), Article 33.
- HINTZE, D., HINTZE, P., FINDLING, R. D., & MAYRHOFER, R. (2017, June). A Large-Scale, Long-Term Analysis of Mobile Device Usage Characteristics. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1(2), Article 13.
- Ki, E.-J., & Hon, L. C. (2006). Relationship Maintenance Strategies on Fortune 500 Company Web Sites. *Journal of Communication Management*, 10(1), 27-43.
- LIU, H., & HE, J. (2017, August). Mining Exploratory Behavior to Improve Mobile App Recommendations. *ACM Transactions on Information Systems*, 35(4), Article 32.
- LU, X., CHEN, Z., LIU, X., LI, H., XIE, T., & MEI, Q. (2017, September). PRADO: Predicting App Adoption by Learning the Correlation between Developer-Controllable Properties and User Behaviors. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1(3), Article 79.
- McCorkindale, T., & Morgoch, M. (2013). An analysis of the mobile readiness and dialogic principles on Fortune 500 mobile websites. *Public Relations Review*, 39, 193-197.

MEHROTRA, A., MULLER, S. R., HARARI, G. M., GOSLING, S. D., MASCOLO, C.,

MUSOLESI, M., & RENTFROW, P. J. (2017, September). Understanding the Role of Places and Activities on Mobile Phone Interaction and Usage Patterns. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1(3), Article 84.

Taylor, M., Kent, M. L., & White, W. J. (2001, June). How Activist Organizations are Using the Internet to Build Relationships. *Public Relations Review*, 27, 263-284.

**Process**

Matthew Frazier

Professor Wilson

Technical and Professional Writing

5 March 2018

Abstract 2

Beldona, Srikanth and Liping Cai. "An Exploratory Evaluation of Rural Tourism Websites."

*Journal of Convention & Event Tourism* 8.1 (2006): 69-80. Print. Tourism is a product that is not tangible, and cannot be physically inspected or traded in sale. Mobile websites have the responsibility to serve as the representation and selling point for any tourism destination, whereas, a majority of rural tourism websites lack this selling point. A website can be evaluated based on the content, interactivity and promotional value. With current websites averaging a total score of 10.3 of a possible 22, rural tourism websites need reevaluation. Many websites focus on content for their success; however, for future success, websites need to exploit not only interactivity but promotional value. As the largest contributing factor, interactivity is essential for exploitation. With different medias, from newspaper, to television, to internet, internet is the only interactive medium consumers can utilize. Many rural companies are treating their websites as "one-to-many," where there is a need and want for a one-to-one communication. Consumers have a natural habit for personal responses to their needs, and when a website fulfills the needs of interactivity, content, and promotional value, the consumer will be left satisfied and wanting more.

To: S. Wilson  
From: M. Frazier  
Date: 15 February 2018  
Subject: Progress Report 1: Barrier to Mobile Application Adoption within Small Rural Brick and Mortar Businesses

**Introduction:**

- Title of research: Barrier to Mobile Application Adoption within Small Rural Brick and Mortar Businesses
- Time period covered by report: 20 January 2018 through 15 February 2018
- The purpose of this progress report is to inform Professor Wilson the status of the feasibility study.

**Work Completed:**

- So far, I have completed the title of the project, a research proposal and gathering of different articles over the subject.
- This research project will be broken into the following tasks:
  1. Gather ideas for research
  2. Title research topic
  3. Write a research proposal
  4. Gather articles over similar subjects
  5. Write a literacy analysis
  6. Create an interview with professor Walters
  7. Interview different business around Hays, Kansas
  8. Compile data and reach a conclusion
  9. Write the finalized research report
- Report Details:
  - Beldona, S., & Cai, L. (2006). An Exploratory Evaluation of Rural Tourism Websites. *Journal of Convention & Event Tourism*, 8(1).
  - McCorkindale, T., & Morgoch, M. (2013). An analysis of the mobile readiness and dialogic principles on Fortune 500 mobile websites. *Public Relations Review*, 39(3), 193-197.

**Work in Progress:**

- Currently, I am in the process of gathering research articles in order to write a literacy review. My goal for this task is to find roughly 7 articles that I can reference to in the finished research paper.
- After gathering the research articles, I will write an in depth literacy analysis over the articles to summarize and synthesize the findings. Once the research has been gathered and processed, I will work with professor Walters to create a set of interview questions that will be asked to different businesses around Hays, Kansas. I will then gather a list of all rural brick and mortar business around Hays, and randomly select a set amount to interview. I will either call the businesses or write a letter of intent for them to reach out to me. Once the

To: S. Wilson  
From: M. Frazier  
Date: 15 February 2018

businesses agree for an interview, I will interview each one individually. After all the businesses have been interviewed, I will gather the data and compile the results into a conclusion. With the conclusion formed, I will be able to write the research paper, and attempt for publication.

**Problems:**

- This far, I have only ran into one problem in my research. In the process of finding research articles, there are very few papers written over this topic. The research on mobile adaptation in general is very scarce. I am currently working with different librarians in Forsyth Library to aid in my process.

**Discussion:**

- At this point with the research I cannot make a justified conclusion on why small brick and mortar business do not create mobile website. I can only conclude that if they were to utilize mobile websites, the websites would be beneficial on bringing in new customers and retaining current customers.

To: S. Wilson

From: M. Frazier

Date: 9 April 2018

Subject: Proposal: Barrier to Mobile Application Adoption within Small Rural Brick and Mortar Businesses

**Problem**

A large percentage of local business websites in rural areas do not utilize mobile website design in a day and age when roughly 67% of rural American adults own a smartphone. When a user navigates to a web page that is not mobile friendly, they become frustrated at the lack of usability. This lack of usability costs the company customers and profit. In an ever evolving world of technology, businesses must keep up to times to retain customers.

**Purpose**

A solution is needed to determine why rural brick and mortar businesses in rural areas are not adapting to mobile friendly websites. Whether the reasoning may be education, funding or lack of interest, a change is needed. The purpose of this study is to determine the feasibility of why there is a barrier to mobile application adoption within small rural brick and mortar businesses.

**Background**

Mobile application has developed tremendously over the previous 10 years. Mobile websites have evolved from a text based page, to a page filled with rich content. The main purpose of a



mobile application is to allow users the increased usability of a website. There is a focus on retaining all the same information on mobile websites compared to the desktop site. Because there is an increase of Americans that are adopting cell phones, many of these people use their device to gather information quickly about new businesses. When a website does not have a mobile friendly application, there is a severe lack of usability that results in frustration for the customer.

### **Scope**

The topic headings of my feasibility study are as follows:

1. Introduction
2. Problem
3. Background
4. Process
5. Research Conducted
6. Results
7. Conclusion and Recommendations
8. References

### **Limitations**

As the topic of mobile application adoption is generally very broad, there are a different limitations that I will consider. Although I will be conducting interviews and gathering recommendations, I will not be pushing the results on the businesses interviewed. In addition, I

will not be conducting interviews in all rural areas, rather those focused in the Ellis county area. When conducting the research I will not be held responsible for creating mobile applications for the interviewed businesses, nor the blame of not informing the business of this problem earlier.

### **Credentials**

As a information technology major who is emphasizing in web development, I have experienced both using and designing mobile applications. I have seen the results of users becoming frustrated with non mobile friendly websites, and have made websites to combat this issues. As I am conducting this research, my professor, Angela Walters of the informatics department, is overseeing my work. Professor Walters emphasizes in web and mobile application development at Fort Hays State University. I have a passion for completing this research to help better the rural community of Ellis county, and potentially boost business for the brick and mortar businesses.

### **Work and Management Plan**

In this study, there are five basic activities in gathering information:

1. Lab work. Lab work will not be part of my study.
2. Field activities. Field activities will not be part of my study.
3. Interviews. Interviews will be conducted on a large number of businesses to determine the cause of why that business has or has not adopted a mobile application website.
4. Letters of inquiry. Letters of inquiry will be sent via email to the businesses to start communication for the interview process.

5. Library research. Library research will be conducted in order to find articles relating to this research. A literary analysis will be written to overview the related articles.
6. Conferences. There is one conference that I will be attending at Oracle headquarters that relates to this field in terms of data analytics.

## **Conclusion**

There are three possible reasons rural brick and mortar business have not enacted mobile applications; they are not aware of the problem, they do not have an interest in the problem or they do not know how to correct the problem. This study will determine why each business does not adopt to mobile applications. Once the problem is determined, action can be taken to help the local business to allow an increase of customer retention and satisfaction.