**Title of Proposed Research**
Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language

**Abstract** (less than 250 words)

The 21st century world is characterized by an intrinsic global connection which became available with the creation of the Internet around 1960. People from a variety of cultures, social backgrounds, ethnicities, sexual orientation, language, and physical conditions among other aspects relate to each other every day, and that is not different within the library environment.

Informational professionals must be willing to be opened to all types of minority groups which encompass what we call diversity, and use all tools available in order to serve these groups with excellence. In this respect, technology plays a very important part, specifically in the information science market, with great technological gadgets libraries can use to fulfill such goals.

This research study will focus on the analysis of software application (APPs) available in the market, which content is related to cultures and languages, and can be utilized by libraries seeking to better serve diverse groups which English is a second language. This would help improve and promote the library service’s excellence and social inclusion.

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<td>January 2015</td>
<td>December 2015</td>
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<td>October 2014</td>
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**Principal Investigator(s)’ Name & Affiliation**
Vilma Silva Butym – University of South Florida
Research Assistant (01)

* Cover page should be in one page.
* Cover page should be the first page of your research proposal. Do not submit cover page as a separate file.
** Affiliation should be your imaginary affiliation. For example, if you’re writing a proposal for USF library as a USF librarian, you should write your affiliation as USF librarian. If you work as a group, all group members should be listed here.
2. Statement of Need & Significance of Study

The U.S. Census 2010 reported that the total Florida population was 18,801,310 for that year. From this amount 4,222,806 were Hispanic or Latino (Mexican, Puerto Rico, Cuban, and other regions), which was an equivalent of 22 percent. A total of 444,821 were Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asian regions) which was an equivalent of 2.4 percent of the whole Florida population in 2010. African Americans represented a total 2,999,862, which was an equivalent of 16 percent of the Florida population, and some other races all together was a total amount of 681,144 persons, an equivalent of 3.6 percent of the population that year. When we aggregate these percentages we reach a total of 44 percent which is a very significant number to consider when speaking about providing library reference services of excellence to diverse groups emphasizing the groups which English is a second language.

Information specialists in Florida and located anywhere around the world should be aware of all demographic changes within their country, territory, or region, and allow room for the new embracing diversity of all types. In order to achieve such goal information specialists must use all tools at their disposal to provide library services with excellence to their patrons from minority groups. Therefore this research study will focus on types of software applications, most commonly known as APPs, available in the market nowadays which have been used at regular desk tops, lap tops, iPads, iPhones, and can be utilized at libraries to better serve diverse groups, in particular those groups which English is a second language. The software applications taken into consideration for this study will be the ones which provide to users world culture and languages information. This study will be applied among 20 public and academic libraries located in Tampa, Florida.

The purpose of this study is to understand utilization of APPs in improving library services for ESL population. Specifically, the following research questions will direct this study:
1. What types of barriers (language, culture, technology) are faced by minority groups which English is a second language within the library environment during an informational searching process?

2. How can libraries utilize technology tools available in the market, specifically software applications (APPs) in order to improve library services and better serve diverse groups?

3. How to diminish the communication gap between libraries and patrons from minority groups utilizing software applications (APPs), consequently fostering social inclusion?

**Impacts of the Study:**

Geographical demographics have been changing constantly and with the advance of technology the population has become more diverse rapidly. This study will foster higher enlightenment into the library and information science environment in ways that will emphasize the factors bellow:

- Promote multicultural awareness among information specialists professionals;
- Provide information specialists with information about technological tools that can be used in pursuance of excellence in library reference service to accommodate diverse groups which English is a second language;
- Generate genuine multicultural interest among library patrons and information specialists;
- Advocate and support minority group’s social inclusion, in particular those groups which English is a second language.
An extensive bibliographic research was completed with regard to establish a solid foundation for this paper. This bibliographic research encompassed academic and public libraries research studies involving minority groups emphasizing those groups which English is a second language.

A common denominator among the majority of these research studies papers was the fact that country demographic has undergone tremendous changes shaping the country into a multicultural, international environment which will continue to evolve throughout the future. Therefore, professionals of all fields including information science professionals should be able to adapt to such demographic changes the country has assimilated as well. As stated by Buttlar (1994) paraphrasing James O. Freedman, President of Dartmouth College:

Changing population demographics in the latter years of the 20th century are major themes in the professional literature of the education and librarianship. Some writers like James O. Freedman, President of Dartmouth College, emphasize the importance of diversity to academicians. According to him: “The fundamental reason that diversity is important is that we are a diverse country, and our leadership is necessarily going to have to be drawn from a spectrum of ethnic, religious, and racial groups if we are to be successful as a democracy. (…) By the turn of the century this country is going to have very substantial numbers of minorities in a significant number of states and an even larger number in 50 major cities. And in many of those communities and states, minorities will in fact constitute the majority population. It is essential that American higher education commit itself to educating men and women – majority and minority – who will be leaders of those communities”
The majority of studies analyzed dealt profoundly with the issue of social inclusion of minorities groups taking into consideration library reference services, library collection development, and library personnel. Morales, Knowles & Bourg (2014) stated that “library professionals need to be sensitive to difference both regardless of and because of the demographic makeup of the communities they serve. Moreover, a social justice perspective compels us to find ways that librarianship and libraries are resources informed by, reflective of, and available to all people”.

For the purpose of this study the two main library segments focused on will be public libraries and academic libraries. Both institutions serve a large number of patrons from a variety of racial and ethnic groups which English is a second language, and these library segments have significant influence towards the educational and professional life aspects of its patrons. Regarding the academic library, Morales, Knowles & Bourg (2014) stated the following “to reflect the diversity of our communities and provide a full spectrum of diverse services and resources to those communities, library professionals need to be aware of the changing ethnic and racial makeup of the current and future college student populations”. Still on to the subject of library services created to serve patrons who represent diversity, in particular, language and cultural diversity, Frederiksen (2014) emphasizes that developing, maintaining, and managing diverse and vibrant collections are critical functions for librarians.

This study will shed some light regarding new software technologies librarians can use in order to foster library services of excellence focusing unitarily on the utilization of software applications, most commonly known as APPs, by library patrons and librarians. This study is innovative and pioneering; in a sense that it includes the new technology mentioned above in order to analyze information needs and multiculturalism establishing level of satisfaction among diverse groups which English is a second language.
Methodology:

This study will be conducted in four distinctive phases, and it will be applied among 20 libraries, from which 10 will be academic libraries and the remaining 10 public libraries located in Tampa, Florida. The first phase will encompass a research about all major software applications (APPs) available in the market nowadays which somehow are connected with the subjects of culture and language. The second phase of this project will constitute of the application of questionnaires that will be performed among those libraries users, and librarians. The third phase of this research study will include interviews with chosen participants. The goal is to interview a total of 30 library patron users from minority groups which English is a second language, and 15 reference librarians. The last phase, will be regarding an experiment with two different types of APPs which will involve some of the subjects who participated in the survey. Subjects will be selected from both groups: library patrons and librarians. A total of three representatives from each group will be chosen for this experiment in order to verify which application would work best for a library environment. Selected subjects will be asked to use such applications for 15 days. Data will be recorded and collected by Principal Investigator and Research Assistant through the administration of questionnaires.

Sample & Population

This study aim to aggregate for empirical analysis a sample composed of subjects from different age range, both female and male, from different social background in order to avoid biases. Simple random sampling will be the technique utilized to accomplish this phase of the study. The final goal is to compose a sample pool of not less than 50 subjects from each library segment: public and academic.
Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language

A sample pool of librarians will also be formed. In this respective sample, subjects will be chosen from different library department areas such as Reference Services and Technical Services departments. By selecting library professionals from different areas of expertise within the library environment, this study will provide a broader understanding on how library services can be improved to foster an excellence among all activities involving diverse groups.

**Data Collection**

A series of questionnaires will be applied to each sample group through email in order to collect the desired information. Questions will be open and closed-ended, and will also include rating and Likert scale questions. Questionnaires will be constructed based on the sample group it is destined.

After collection of such data via email, an equal number of subjects from both sample groups, library users and librarians, will be selected for a live online interview. Questions for this live online interview will follow the same parameters of questions for the written questionnaires. Each interview will last around 30 min. Tools such as Skype or/and Google chat will be used for the concretization of this phase.

Automatic transcribing of interview content will be done, as interviewee and interviewer will be typing back and forth.

Also an experiment will take place which will involve 3 representatives of each sample group. After collecting information about APPs available in the market (first research phase) that are connected to cultural and/or language knowledge, Principal Investigator will select two of these applications and asked library patrons and librarians to use such applications for 15 days. This will be the last phase of the study, and subjects will provide detailed information about the usage of such specific APPs proving if they are suitable for betterment of library services designed to ESL community.
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<tr>
<th>Month</th>
<th>Activity</th>
<th>Objective</th>
<th>Person Responsible</th>
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<tbody>
<tr>
<td>Jan. 5&lt;sup&gt;th&lt;/sup&gt;-25&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Initiate first phase of research</td>
<td>Collect information about APPs available in the market focusing on providing information about application creator, application platform type, price, level of difficulty for usage and installation, ranking, and if it fits the subject of the study (culture and/or language)</td>
<td>Principal Investigator Research Assistant</td>
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<td>Feb. 02&lt;sup&gt;nd&lt;/sup&gt;-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Elaborate technical report with information collected on phase 1</td>
<td>Divide APPs into main categories and list their relevant information listing fields above.</td>
<td>Principal Investigator Research Assistant</td>
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<td>Feb. 18&lt;sup&gt;th&lt;/sup&gt;-28&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Elaborate survey questionnaire to be administered among librarians, and library patrons</td>
<td>Administer questionnaire among librarians within the library research pool</td>
<td>Principal Investigator</td>
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<tr>
<td>March 02&lt;sup&gt;nd&lt;/sup&gt;-20&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Initiate second phase: email survey to library patrons</td>
<td>Administer questionnaire among subjects from public libraries in order to collect their input on the subject</td>
<td>Research Assistant</td>
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<tr>
<td>March 23-April 20th</td>
<td>Continue working on research second phase: email survey to library patrons</td>
<td>Administer questionnaire among subjects from academic libraries in order to collect their input on the subject</td>
<td>Research Assistant</td>
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<td>April 27&lt;sup&gt;th&lt;/sup&gt;-May 18&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Initiate third phase: email survey to librarians</td>
<td>Administer questionnaire among subjects in order to collect their input on the subject</td>
<td>Research Assistant</td>
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<td>Date Range</td>
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<td>Principal Investigator</td>
<td>Research Assistant</td>
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<td>May 25th - June 15th</td>
<td>Elaborate graphics to represent data collected from the surveys</td>
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<td>Provide quantitative illustration of research study data</td>
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<td>June 22th - June 30th</td>
<td>Contact librarians in order to get permission to initiate phase 04: case study (experimenting 2 APPs)</td>
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<td>Provide librarians with two APPs which they will use to help ESL patrons during a period of 15 days in order to execute an empirical experiment for this research study</td>
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<td>July 06th - July 31st</td>
<td>Download APPs on library devices, and monitor APPs' usage (downloading of application will be done only on libraries that would like to be a part of this experiment)</td>
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<td>Implementation execution, and conclusion of phase 4</td>
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<td>Aug. 03rd - Aug. 21st</td>
<td>Elaborate graphics to represent data collected from the experiment</td>
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<td>Provide quantitative illustration of research study data</td>
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<td>Sep. 01 - Sep. 30th</td>
<td>Set up interviews with library patrons and librarians</td>
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<td>Collect testimonials about APPs usage from library patrons and librarians in order to provide enough information about suitability of specific applications within the library environment</td>
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<td>Oct. 01st - Oct. 30th</td>
<td>Put all data together and write final general research study draft</td>
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<td>Write a clear research study draft with visual data representation</td>
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<td>Nov. 02nd - Nov. 20th</td>
<td>Editing research study draft</td>
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<td>Write a clear research study draft with visual data representation</td>
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<td>Dec. 18th</td>
<td>Final research draft compiled and approved</td>
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## Proposed Budget

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### Equipment

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**Total Amount Requested:** $6,550.00


Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language


Appendices

Questionnaires

Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language - Part I: General demographic information

1. Please state your sex:
   (   ) Male       (   ) Female

2. Please state your age:
   (   ) 12-17 (   ) 18-24 (   ) 25-34 (   ) 35-44 (   ) 45-54  (   ) 55-64 (   ) 65-74 (   ) 75 years or older

3. Please state your marital status:
   (   ) Married (   ) Widowed (   ) Divorced (   ) Separated (   ) Single

4. What country were you born?

5. Please state your race (Race categories were retrieved from the Census report entitled
   (   ) Overview of Race and Hispanic Origin: 2010, released on March 2011)
   (   ) African American or Black
   (   ) American Indian or Alaska Native
   (   ) Asian
   (   ) Native Hawaiian or Other Pacific Islander
   (   ) White
   (   ) Other

6. Please state your ethnicity:
   (   ) African American or Black
   (   ) American Indian or Alaska Native
   (   ) Asian
   (   ) Hispanic or Latino
   (   ) White
   (   ) Other

7. What is your educational level?
   (   ) Completed some high school
   (   ) High school graduate
   (   ) Completed some college
   (   ) Associate degree (ex. AA, AS)
   (   ) Bachelor’s degree (ex. BA, AB, BS)
   (   ) Master’s degree (ex. MA, MS, MEng, Med, MSW, MBA)
Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language

8. Are you currently employed?
( ) Yes ( ) No

9. If you answered yes to question 8, please choose one of the options below:
( ) Employed for wages
( ) Self employed
( ) Out of work and looking
( ) Retired
( ) Student
( ) Other

10. Please identify your primary (mother) language

11. What other language(s) do you speak fluently? Check as many you want.

( ) Arabic ( ) Hindustani ( ) Spanish
( ) Bengali ( ) Malay-Indonesian ( ) Russian
( ) English ( ) Mandarin ( ) Other
( ) French ( ) Portuguese

Analyzing the Utilization of Software Applications (APPs) to Improve Library Reference Services Among Diverse Groups Which English is a Second Language -- Part II: Technology Survey

1. What type of technological devices do you possess? Please select all that apply:
( ) Computer (desktop)
( ) Laptop
( ) Tablet
( ) Smartphones
( ) Other

2. How many APPs do you currently have on your technological devices? Please, select one:
( ) 1-5
( ) 5-15
( ) 20+

3. On a typical day, how many of those APPs do you use?
( ) 0
( ) 1-5
( ) 5-10
( ) 10+

4. What types of APPs do you usually download on your devices (computer, tablets, IPads, smartphones, etc.)?

( ) Games
( ) Books & Reference
( ) Business
( ) Comics
( ) Communication
( ) Education

( ) Medical
( ) News & Magazines
( ) Photography
( ) Productivity
( ) Shopping
( ) Social

[page 13]
( ) Entertainment  ( ) Sports
( ) Finance  ( ) Tools
( ) Health & Fitness  ( ) Transportation
( ) Libraries & Demo  ( ) Travel & Local
( ) Lifestyle  ( ) Weather
( ) Live Wallpaper  ( ) Widgets
( ) Media & Video

5. Do you pay for APPs?
( ) Yes  ( ) No

6. If you answered yes above, how much would you be willing to pay?
( ) $0.99-$2.99  ( ) $3.99-$5.99  ( ) $6.99+

7. In your opinion what would be the most appropriate price for an APP of good value (relevant content for execution of specific activity)

8. Do you use APPs for any type of communication? Please, specify the type and name of APP used for that purpose. (This question relates to the use APPs for translation purposes and/or cultural knowledge)

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9. Do you access and use APPs in your library?
( ) Yes  ( ) No

10. If you answered YES above, please list the type and name of APPs you usually use in your library:

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