



**KABARAK UNIVERSITY**

**6<sup>TH</sup> ANNUAL INTERNATIONAL RESEARCH CONFERENCE**


# **REVIEW OF MOBILE SOCIAL SOFTWARE USABILITY**

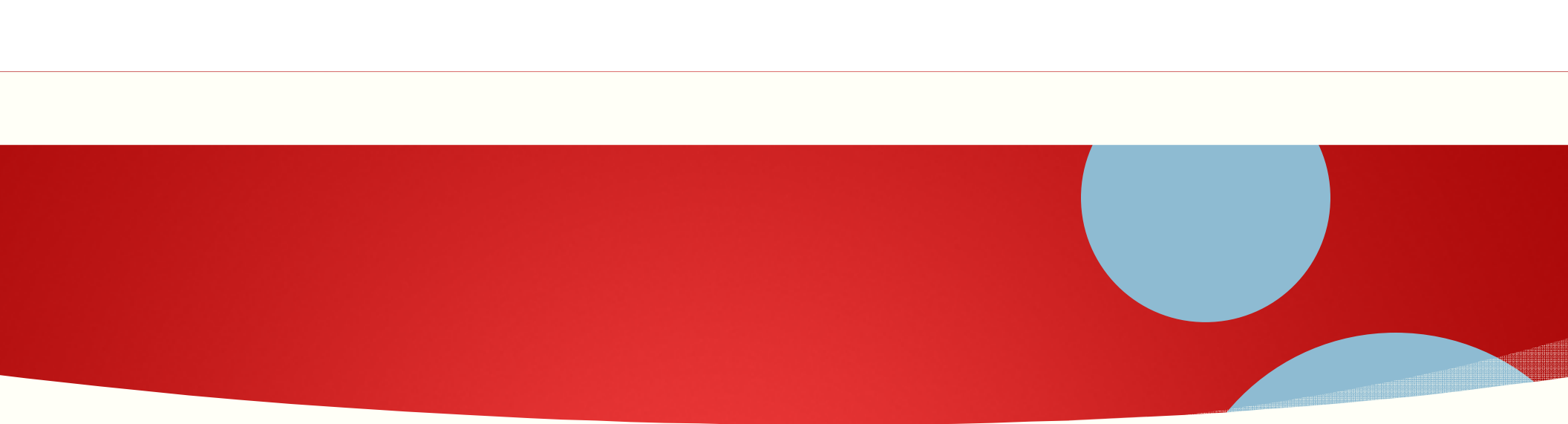
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**20/07/2016**

# INTRODUCTION

- ▶ Advances in mobile technology have enabled a wide range of applications to be developed that can be used by people on the move. Developers sometimes overlook the fact that users will want to interact with such devices while on the move ( Arning et al .,2010).
- ▶ Small screen sizes, limited connectivity, high power consumption rates and limited input modalities are just some of the issues that arise when designing for small, portable devices(Apitz et al.,2008)

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- ▶ Social software as a combination of various social tools within a growing ecosystem of online data and services, all joined together (aggregated) using common protocols, micro-formats and Application Programming Interface (API) methods (Bryant.,2012).
  - ▶ Firstly These tools allow people to participate by creating, publishing and distributing content, such as video, pictures, music and texts through the Internet.
  - ▶ Secondly, social software allows people with similar interests to find one another and connect through social networking sites, such as MySpace and Facebook (Leadbeater (2013)).

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- ▶ Usability is a measure of interface quality that refers to the effectiveness, efficiency and satisfaction with which users can perform tasks with a tool.
  - ▶ Evaluating usability is now considered an essential part of the system development process and a variety of methods and have been developed to support the human factors (Dillon., 2011).

Sun Microsystems (2013), presents six attributes that extend the definition of usability in ISO 9241-11,

Attribute	Usability attempts to measure
Utility	How useful the application is
Learnability	How easy it is to learn
Efficiency	How much it streamlines the work process
Retainability	How easy it is to remember application operations
Errors	How many errors occur during work
Satisfaction	How much people enjoy using the application

source : Crowther, Keller, & Waddoups (2014)

# Statement of the problem

The problem at hand is to investigate while mobile computer technologies have the potential to help many of today's users, mobile devices appear to be difficult to learn to use, adopt, and benefit from. mobile social software that are easier to learn and use are needed today and in the future.

# Study objectives

- To establish the attributes used when considering the usability of mobile social software.
- To explore what extent are the factors of usability considered.
- i. To identify challenges experienced while using mobile social software.



# LITERATURE REVIEW



# PACMAD usability model

The (People At the Centre of Mobile Application Development) PACMAD usability model aims to address some of the shortcomings of existing usability models when applied to mobile applications. This model builds on existing theories of usability but is tailored specifically for applications that can be used on mobile devices (Harrison et al., 2013).



The PACMAD usability model for mobile applications identifies three factors (**User, Task and Context of use**) that should be considered when designing mobile applications that are usable. Constantinos et al.,(2011).

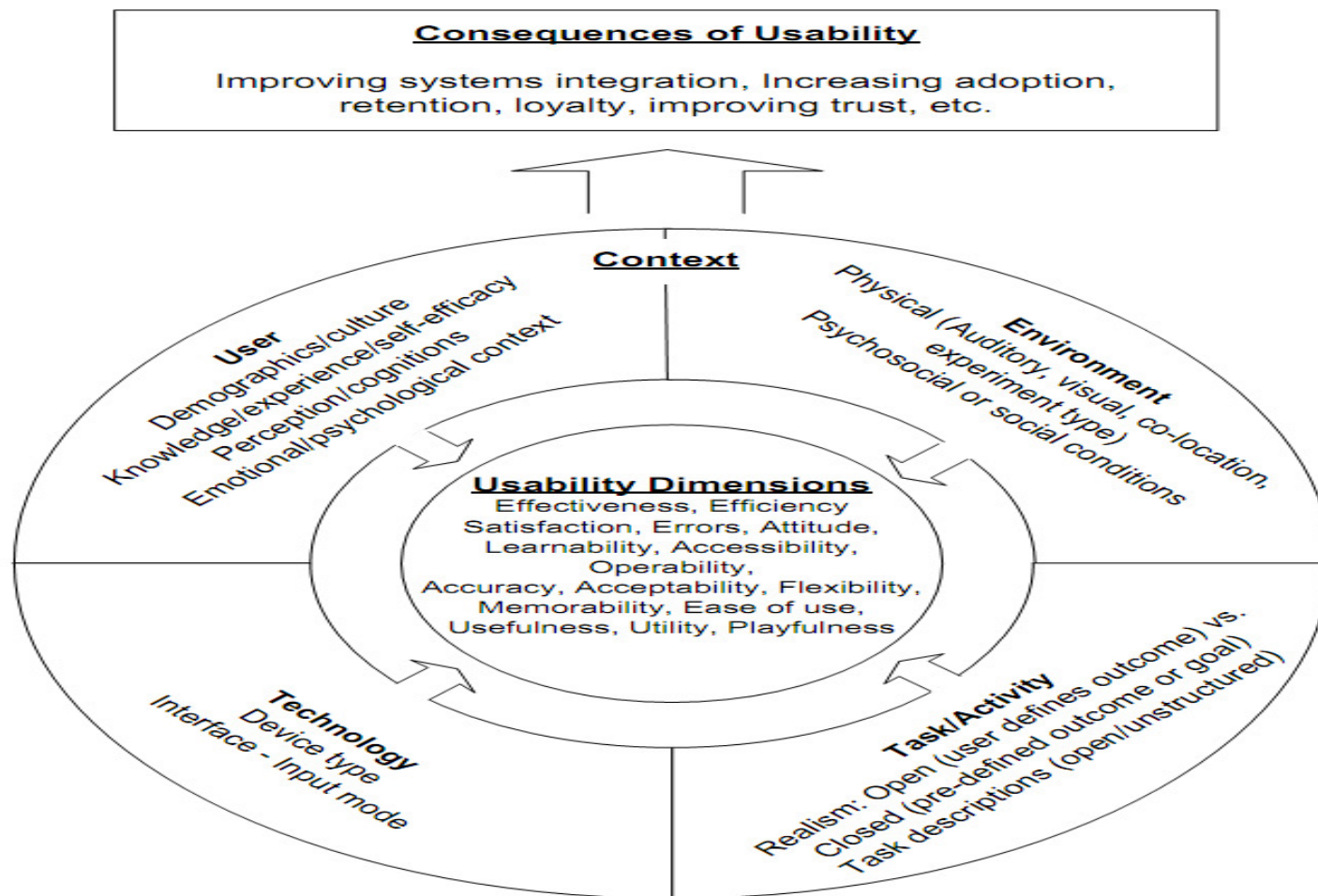
# Attributes of usability

The PACMAD usability model identifies seven attributes which reflect the usability of an application:

***Effectiveness, Efficiency, Satisfaction, Learnability, Memorability, Errors and Cognitive load.***

Each of these attributes has an impact on the overall usability of the application and as such can be used to help assess the usability of the application (Harrison et al., 2013)

# Factors affecting usability



Source : Constantinou et al.,(2011)


# Challenges in mobile usability

Chang et al., (2005) identified the following contributing factors that affect mobile usability :

- v) **Mobile context** :The fact that users are distracted by the surrounding environment, e.g. by noise, movement, or light level.
- i) **Connectivity**: Many mobile devices do not have an internet connection all the time and most have considerably slower network
- ii) **Small screen size**: small screens are harder to read and require different aesthetic decisions.
- v) **Different display resolutions**: a number of differing screen sizes and display resolutions exist in the mobile market;
- v) **Restrictive data entry methods**: small or virtual (on-screen) keyboards make it difficult to quickly enter data and may increase the error rate

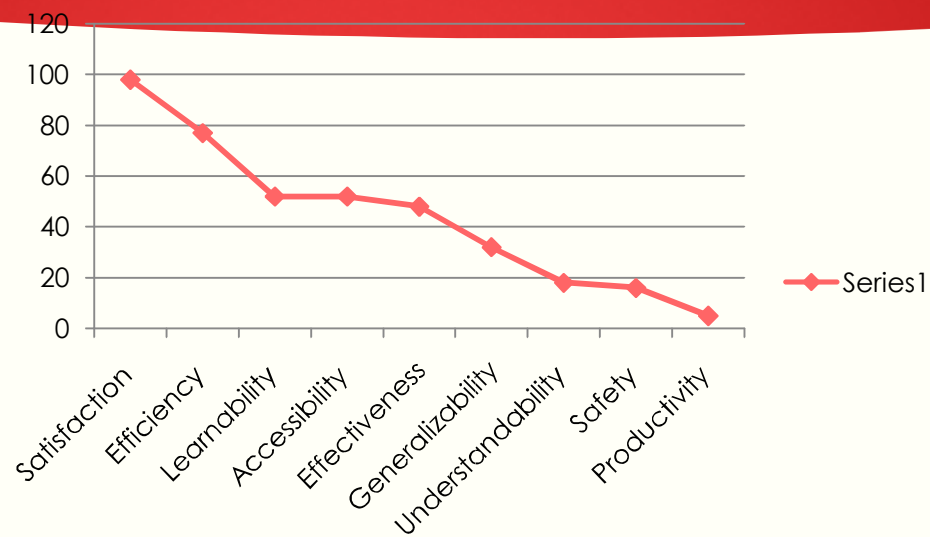
# Methodology

In this paper the secondary data was used targeting mobile social software with a sample size of 368 mobile social software users



<b>Attribute</b>	<b>No of respondents</b>
<b>Satisfaction</b>	98
<b>Efficiency</b>	77
<b>Earnability</b>	52
<b>Accessibility</b>	52
<b>Effectiveness</b>	48
<b>Generalizability</b>	32
<b>Understandability</b>	18
<b>Safety</b>	16
<b>Productivity</b>	5

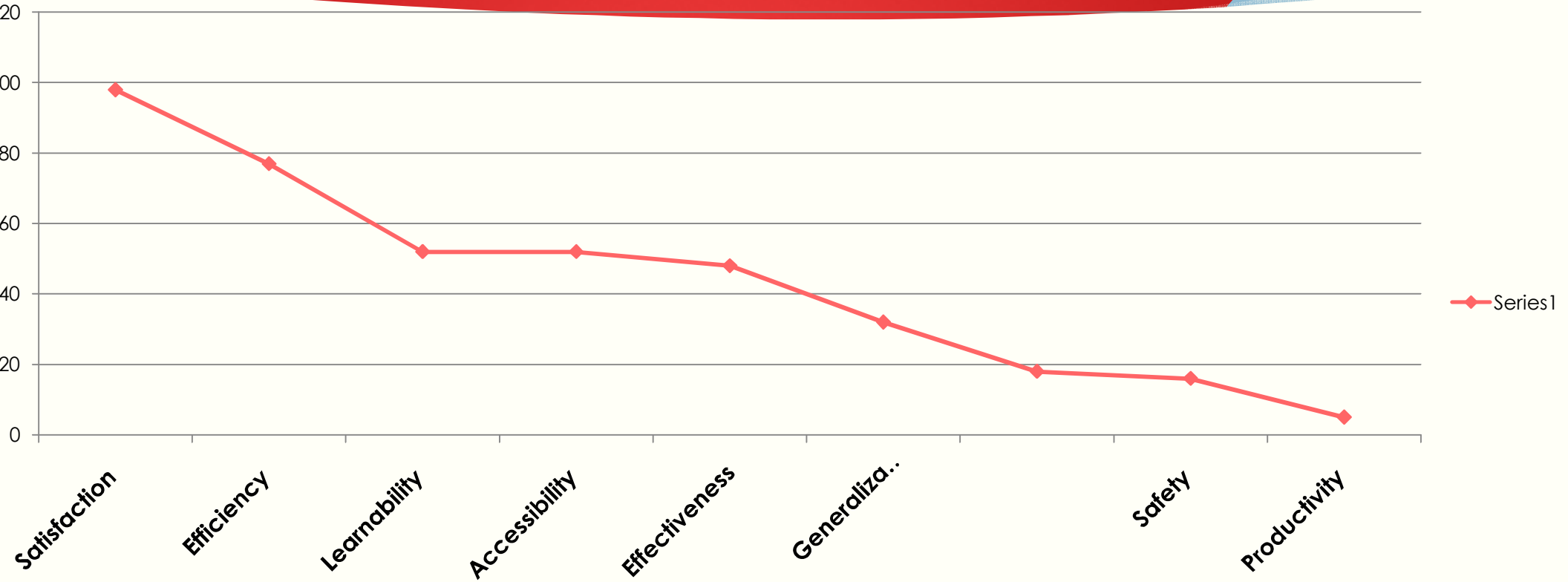
# Findings / Results



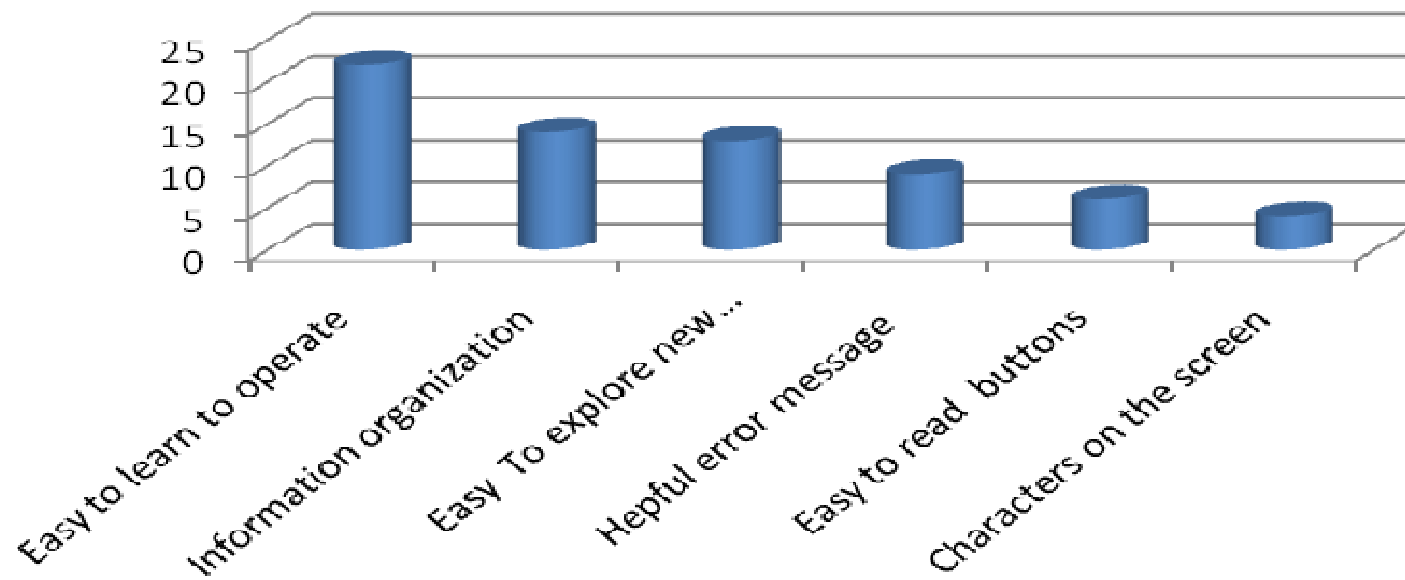


# Usability attributes : Learnability

Attribute	Number
Easy to learn to operate	22
Information organization	14
Easy To explore new features	13
Helpful error message	9
Easy to read buttons	6
Characters on the screen	4



## Usability Attributes



# Conclusions

In this paper we present the emerging trend of mobile social software and the influence of 'usability' on its success, how users face different problems while using mobile social software due to different interface as compared to its desktop version

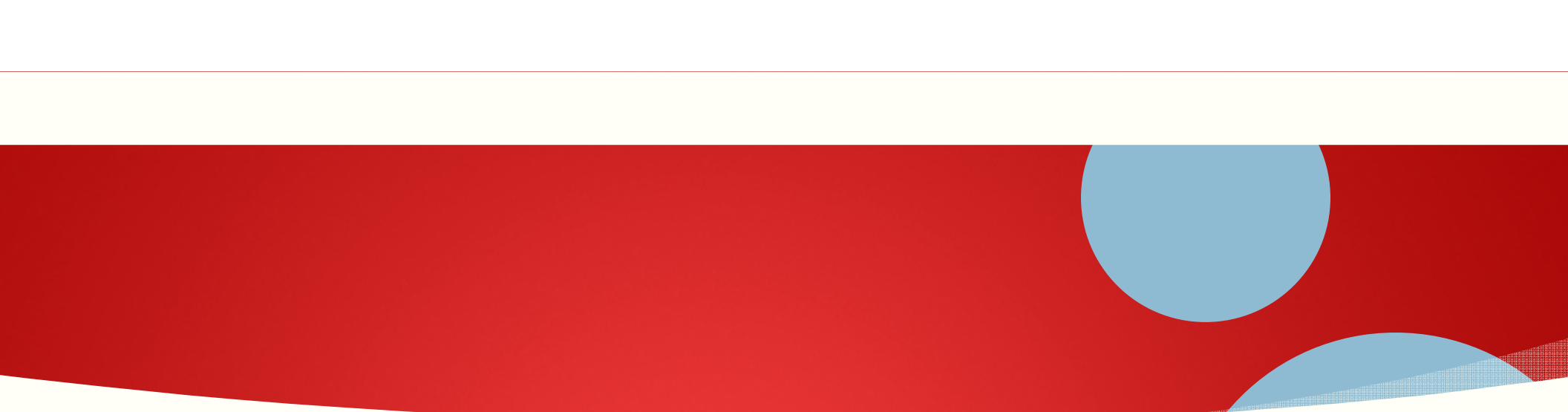
For this reason, this paper aimed to review crucial aspects to be considered when developing such software

# Recommendations

Usability should always be considered while developing mobile applications so as to enhance their acceptance by the end users

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