

# Human Interaction with Mobile Devices on Social Networks by Young and Elderly People: Iraq a Case Study

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## Abstract

**Background/Objectives:** This research attempts to deal with the human interaction with mobile devices on social networks by young and elderly people in Iraq. The research aims to investigate the most important positive or negative social consequences. **Methods/Statistical Analysis:** The study sample test comprises of (500) people. The examination in view of the strategy for social study by method for test technique and applies questionnaire as a method to gather information. The exploration proposes study as the first of its kind to make a decision to choose the best criteria based on HMI technology, in addition to the use of association rules. It also provides the necessary structure for building the system in knowledge base of young and elderly people in Iraq. To investigate HMI framework, methodologies, and processes, techniques to bring another measurement, the need to oversee learning by concentrating on individuals and upgrade their capacity by enhancing correspondence, data exchange and coordinated effort. To propose applications or programs that make the user, even young or elderly people, more interest or related to learning and applying the instructions mobile devices in social networks. **Findings:** The main findings of the research are that the cell phone has positive and negative results. The survey focused on determining the main uses (normal use or internet use) and advantages and disadvantages of human cooperation with mobile on social networks by youthful and elderly individuals. The study demonstrated that despite the fact that the greater part of users had a mobile that is utilized for daily affairs, some of them regardless confront challenges of taking care of them. The study demonstrated that albeit most users receive the social networks for over one hour a day, some of them despite everything they encounter challenges amid its utilization and request better approaches for cooperating with this apparatus. **Application/Improvement:** There are two important aspects of this research: the first one is the theoretical study that the follow-up technical developments and their different effects on social surroundings is very important for human society in general while the second one is the applied study that found the problems associated with the use of devices usually associated with use and to identify these problems usually helps minimize raised through preparedness and provide solutions and submit proposals and start preventive programs in the early times before it's too late.

**Keywords:** Human Mobile Interaction, Mobile Devices, Social Networks, Young and Elderly People

## 1. Introduction

As indicated the United Nations (UN)<sup>1</sup>, there are as of now very nearly 900 million individuals matured 60 or over on the planet. By 2050, it is normal that this number will be 2.4 billion individuals, which exhibits that the more established grown-up populace will have a quicker

development contrasted with other age bunches. Likewise According to the United Nations (UN) 1, there are at present nearly 1.85 billion people age 0-14 years (26%).

In Iraq, this growth rates are not different according to the scurvies' Iraq's population tripled between 1970 and 2009, growing from 10 to 33 million, 71% of whom currently live in urban areas. People aged 60 or over

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represented 3% of population in 2003 while people aged less than 18 represented 45% in 2009<sup>2</sup>. Human interaction with mobile devices on social networks by young and elderly people in Iraq representing a good environment because of many success factors and development limitations that provide or allowed create, capture and share the knowledge between them, therefore, the economic embargo for more than 12 years and the security situation in this country limited or reduced share knowledge media. Human interaction with mobile devices on social networks have attracted in a great many users and its utilization of this administration has outperformed the email agreeing to<sup>3-6</sup>. Many social networks have emerged multi purposes such as: professional networks, networks for sharing short messages (Twitter), video sharing (YouTube), and networks of friends (Facebook). Facebook has shared as an entertainment environment to business environment that represent entertainment, social network between people, announcement place and complete portal. Since the mid 2000s there have been changes in the way users and organizations utilize the web to give administrations, get to content and associate with different clients called web social, is portrayed by the capacity and utilization of items drawn by the user from collaborative exercises<sup>1</sup>.

Many researchers<sup>2</sup> handle with social networks studies for example, business (advertising, marketing, political causes, and so forth.), sociological (the investigation of human conduct and their correspondence), security and privacy, Internet (movement volume information), user interfaces and e-learning. Today online social networks have been good successes in the web development to provide the user with a good service. It assumes the critical part of online social network of empowering distinctive users to convey and work together similarly. Considering the results of the participation in Iraq of older users aged 60 on social networks, which is lower than 3%. However, in the last period there has been a development in presence in this way an age of 45 or above and less than 18 are considered for elderly and young people respectively.

The technological revolution provides methods of development and communication techniques enhancement including mobile phone that modern technology has become a necessity in modern life. The mobile phone has penetrated all segments of Iraqi society as anyone have a mobile device not for specific category, mobile phone has many benefits such as contribution to reduce distances and dimensions, times shorten as well as become a significant way and necessary in the perpetuation of social communication process between parents and relatives.

The utilization of social networks in Iraq has been expanding on various gatherings of individuals where the main focusing of use social networks of users is in the 18-45 yearsold group. Although there is a development of the gathering of individuals less than 18 years which utilize social networks and an extension in the gathering of individuals more than 50 years which utilize social networks. These different groups have their own particular needs amid the collaboration with various social networks. The motivation of this research is the detection of the most prominent positive and negative effects that the mobile phone have on the Iraqi society and especially that of the privacy and community customs, traditions and values that could be affected by the impact of mobile use. In this research, a brief description to such integration is made to assist the reader gain some insights into the scope of HMI. The main objectives of this study as follows:

- To investigate, examine and review the related works on Human Mobile Interaction (HMI).
- To design suitable representation infrastructure to the proposed study that shows the most users adopt Human Mobile Interaction on social networks.
- To investigate Human Mobile Interaction on social networks by young and elderly people in Iraq.
- The research suggests a proposed study as the first of its kind to make a decision to choose the best criteria based on HMI technology, in addition to the use of association rules. It also provides the necessary structure for building the system in knowledge base of young and elderly people in Iraq.
- To investigate HMI framework, methodologies, and processes, techniques to bring another measurement, the need to oversee learning by concentrating on individuals and upgrade their capacity by enhancing correspondence, data exchange and joint effort.
- To propose applications or programs that make the user, even young or elderly people, more interest or related to learning and applying the instructions mobile devices in social networks.

From HMI viewpoint, this study is the first of its kind of using HMI with mobile devices on social networks; it appeared, from the studies on this filed, there is no such study for evaluating the role of Human Mobile Interaction on social networks by young and elderly people in Iraq. There are two important aspects of this research: the first one is the theoretical study that the follow-up technical developments and their different effects on social surroundings is very important for human society in general while the

second one is the applied study that found the problems associated with the use of devices usually associated with use and to identify these problems usually helps minimize raised through preparedness and provide solutions and submit proposals and start preventive programs in the early times before it's too late. Its merged propose an applications or programs that make the user, even young or elderly people, have more interaction, interest or related to learn and applying the instructions of mobile devices in social networks. The results of this research will cover all the probabilities that could be presented to evaluate the user. Along the recent increase in the demand for an efficient system for interaction of the young and elderly people, our focus would be to work on the related problems such as usage difficulties and evaluating the young and elderly people by mobile devices on social networks.

## 2. Related Works

HMI with mobile devices on social networks turned into a worldwide social network site with more than four billion users<sup>6</sup>. Logically, people have different milestones from cultures, social, political contexts from many countries to join the social networks.

They<sup>7</sup> mentioned about the use of social networks as by more established clients in the United States, they showed that big people categories can be connected by network in same place or country, the likelihood of synchronous and nonconcurrent correspondence, particularly the utilization of gatherings with normal interests, that making the older users more interest to use the social network site. According to their study, they mentioned that 57% of the general population they met had utilized the system to arrange gatherings with their companions. Research report<sup>8</sup> demonstrates that countless have made an interpersonal interaction profile before they are in the right age (generally 13) to do as such. It is vital to regard the terms of utilization of the site and enroll with the right age, as there are extra assurances set up for more youthful clients. In the event that the site, however finds that underage clients are utilizing the administration, they will erase their record. We ought to dishearten underage utilization of these administrations as well as can be expected, and know about administrations which provide food for more youthful clients by having higher wellbeing highlights. Nonetheless, before youngsters begin utilizing long range interpersonal communication administrations it is vital that they are furnished with the abilities to remain

safe on the web and to utilize informal communication destinations capably. Take a seat together and ensure that you both know how to utilize the security devices that are given. There are numerous routes in which a long range interpersonal communication profile can stay private that will keep your kid from giving out individual data to outsiders. Bolster your youngster in guaranteeing that they just add contacts to these destinations that they additionally know and trust offline. One approach to watch out for how your kid utilizes a long range interpersonal communication site is to associate with them.<sup>7</sup> show that Facebook is center for certain user bunches. They displayed their study in Kenya at rural areas. Their study showed that there is a life limitations such as lack in electric power; Facebook does not create a similar level of intrigue compared to different studies which occurred in created countries. They noticed the cost per month for the user to get internet service to interact on social networks which is almost impossible because of the life limitation in Kenya.

In<sup>1</sup>, Australian government presents research about internet usage and long range interpersonal communication by youngsters, the report demonstrated the comprehension of the contemporary media environment in which youngsters work, see how youngsters are utilizing new electronic media interchanges advances and create group instruction items and effort exercises to help youngsters, guardians and instructors comprehend and explore online dangers<sup>8</sup> report showed that the interaction on social networking sites that all grown-ups matured more than 35 in Hungary have numerous worries about sharing data on the interpersonal interaction locales as there are troubles in comprehension the likelihood of having issues for sharing something individual. Their study showed the social networking sites as entertainment option.

As there were no research articles regarding using HMI subject in Arab countries in general or especially in Iraq. The main purpose of this study is to gather information of the more seasoned and young users' gatherings, dissecting their troubles. Our research was motivated to study the use of the Human Mobile Interaction on social networks in Iraq by the elderly and young users.

## 3. The Survey in Iraq

Human interaction with the computational system making executing more jobs on desktop, web, or versatile

situations through the UI components is easier as detecting the system components become clear to the user. The interface for the user represents a communication gate, the enormous test of a UI is to empower a space for adults and young's user<sup>9</sup>. In that sense, there are seven standards for UI plan that might be considered whenever amid the outline of a UI in any request; those principles are: **Visibility, Consistency, Tolerance, Affordance, Simplicity, Structure and Feedback**. The development of an entertainment interface for elderly and young users must be learned easily in their daily life. Our study conducted from study arranging and the information collection and inspiration to upgrade the collaboration with components that were a piece of the interpersonal organization environment. Many researchers and reports showed that the main use of the users who joined social networking sites is posted, status, share connections and photographs to loved ones such as family and friends<sup>8</sup>.

### 3.1 The Planning

Many phases can use a survey such as surveys, meetings, perception and content examination. The decision making is most important to a survey methodology, including answer on how<sup>10</sup>: **Recognize and select potential example individuals, Contact examined people and gather information from the individuals who are difficult to reach (or hesitant to react), Evaluate and test questions, Select the mode for suggesting conversation starters and gathering reactions, Train and administer questioners (in the event that they are included), Check information documents for exactness and inward consistency, Adjust study assessments to amend for distinguished mistakes.**

To investigate and implement our study, a questionnaire was developed and applied, as a paper-based review, to two gatherings of grown-ups and youthful users. The inquiries in the survey were expounded in view of related work and on the characterized objective. The survey of our study was isolated into three areas: the initially centered around the education level, age, occupation and sexual orientation. The second focused on the use of the mobile phone devices by adults and young people, the purpose of use, time of usage and advantages and disadvantages. The survey about user's age included adults and young people from 15 to over 60 years. There were 15 questions in total, the questionnaire in mobile phone devices were multiple choice questions. Finally, the third section focused on the utilization of the web and interpersonal organiza-

tion webpage by adults and young people, the purpose of use, time of usage, specific social networks such as Facebook, Twitter, and YouTube, Activity of Internet and social networks site on Iraqi sociality and advantages and disadvantages. There were 21 questions in total, the questionnaire in internet and social networks site were various decision questions.

The survey was made on printed frames. The goal, theory, technique and materials used to check the study subject were characterized<sup>11-15</sup>:

**Hypothesis:** From the HMI point of view, human interaction with mobile devices on social networks site by young and elderly people in Iraq. What they notified of any effective, difficulties or features on Young and Elderly People that can be enhanced to suit the requirements of this user groups?

**Objective:** To gather the fundamental strategies of HMI and investigating its related works. Also to investigate HMI framework, methodologies, processes, techniques to bring the need to oversee learning by concentrating on individuals and upgrade their capacity by enhancing correspondence, data exchange and joint effort. Finally, to propose applications or programs that make the user even young or elderly people more interest or related to learn and apply the instructions of mobile devices in social networks<sup>16-18</sup>.

**Applied methodology:** To gather the principle techniques for HMI, The survey was made on printed papers, numerous feelings and opinions proposed or welcomed to balancing a survey about socio social conditions and use of the cell phones and web and interpersonal organization by youthful and elderly users<sup>19,20</sup>.

**Support Material:** To conduct the exploratory experiment, a profile survey questionnaire was prepared, which consists of questions about cultural and social characteristics so that it is possible to profile these users<sup>21,22</sup>.

## 4. Results and Discussion

As we mentioned above, the survey was created on printed papers, we took 500 participants from different cities, different educational levels, different age groups and to outline the consequences of the surveys from the adults and young user groups. The questionnaire represents an important study in Arab countries in general and in Iraq especially. For the purpose of evaluating the survey results., the questionnaire was divided into three modes from the users' point of view<sup>2,23,24</sup>.

### 4.1 User Profile View

The technological revolution provides methods development and communication techniques enhancement, including mobile phone, as modern technology has become a necessity in modern life. The mobile phones have penetrated all segments of Iraqi society so anyone have a mobile device that can be used not for specific category. Mobile phones have many benefits such as contribution to reduce distances and dimensions, times shootings as well as become a significant way and necessary in the perpetuation of social communication process between parents and relatives. In this section we would like to discover and analyze human mobile interactions on social networks sites from the perspective of their profiles. the survey was created on printed papers, there were (61%) males and (39%) females. Also (95%)of the selected samples have mobile devices.The number of users that have social network records was most likely bigger than typical. The age gatherings were spoken to by (3%) for ages under 18, (44%) for ages 18 to 25, (29%) for ages 26 to 35,(5%) for ages 36 to 45, (3%) for ages 46 to 56, and (2%) for ages over 60, demonstrating a pattern of huge increment of more youthful and more seasoned users investment throughout the following years<sup>25,26</sup>. Figure 1 shows the percentage of the age's groups for the selected samples.

In this study, we would like to discover and analyze human mobile interaction with mobile devices on social networks sites from the perspective of their profiles. As we mentioned, the questionnaire was created for Iraq. We discover and analyze the nature of Iraqi people such as regression classes were Urban (79%) and Rustic (21%). The job groupsas there were Government Employees (25%), Private (8%), Wage earners (7%), Students (53%), Retired (4%), and Housewives (3%).

Marital Status were Married (40%), Singles (58%), Divorce (1%), and Widowed (1%).Figure 2 demonstrates that most member (62%) have a university or postgraduate degree. In any case, as indicated by the study comes about, 5% of users have just deficient rudimentary stage, exhibiting that the product is utilized by individuals with various training levels. Considering the results that the users profile is made out of future youthful and more established users generally them have an abnormal state of education, there are inactive necessities to give an alternate method for interaction.

### 4.2 Mobile Interactive Use View

This view concentrated on appreciating the most exercises performed by the usersin mobile devices for young's

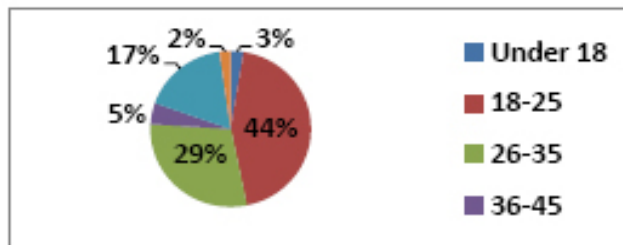


Figure 1. The Selected Age Groups.

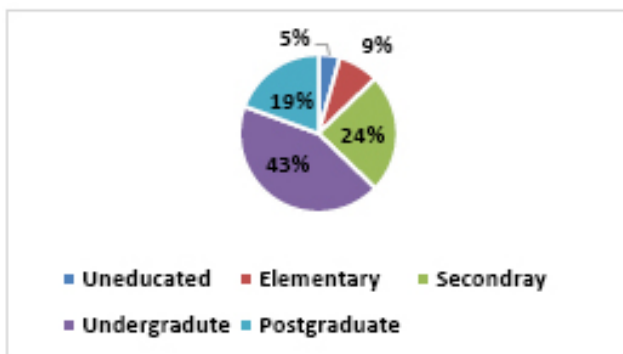


Figure 2. The Education Level.

and elderly people. Figure 3 presents the recurrence of mobile use for the met users.It can be observed from Figure 3 that,among the (95%) of the users that have mobile phones, most users (55%) use mobile device in a daily base for calling and messaging only. This clearly indicates that most of the users in Iraq prefer to choose the calls and messages as their primary way of communicating with each other rather than using the other social communications methods. It can be seen from the overview that most users utilize mobile devices in an average time hours of 1-2 hours (20%), (21%)2-6 Hours, (27%) Over 6 Hours and (32%) for an unspecified time. Figure 4 presents percentage of hours in the use of internet applications (search for information). The results showed that (52%) of the internet applications users spend 1-2 Hours only, this is an indication of the lack of spare time for those users due to their daily responsibilities.

Figure 5 shows that most of the selected users (35%) spend unspecified time using social networks. This indicates that there was no specific schedule for those users.

At the point when the users were addressed about the utilization of the primary capacities or benefits of using a mobile devicefor the age groups that are less than 18 years, it was found that most of them (36%) answered “accomplish a lot of things and to shorten the time” as shown in figure 6. Also most of the users that belongs to age group of 55 years or older (36%) choose the same answer. This

indicates that teenagers and elderly people in Iraq like to save time in order to do a lot of things as they easily get bored when spent along time to accomplish one task.

When the teenagers users were questioned about the effects of the use mobile device, most of them (36%) answered "Impact on the educational side", while (35%) chose "Facilitates delinquency and crime and murder" finally (29%) of the users chose "Create social problems among family members". The answer of the most of the above 55 years users were different as most of them (36%) chose "Create social problems among family members" indicating that elderly people prefer a face to face social communication with people rather than a virtual social communication.

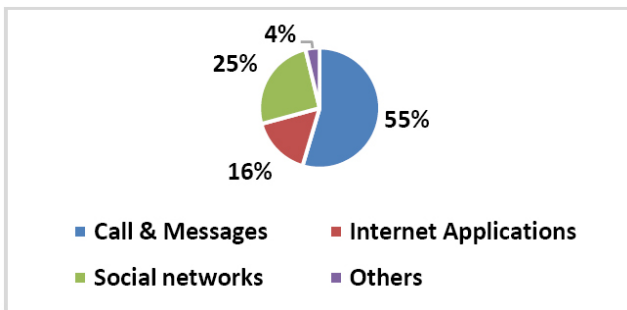


Figure 3. The Frequency of Mobile Use.

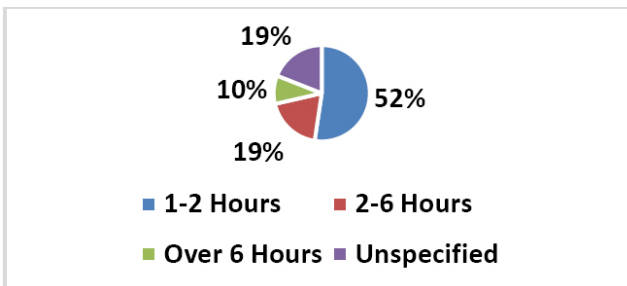


Figure 4. Internet Applications Usage.

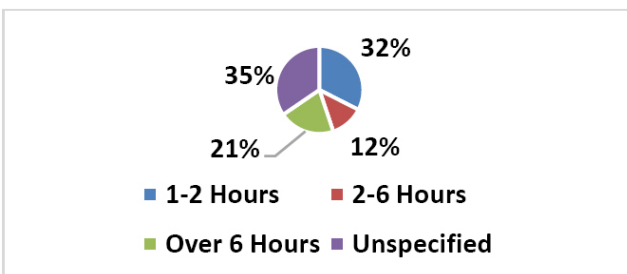


Figure 5. Social Networks Usage.

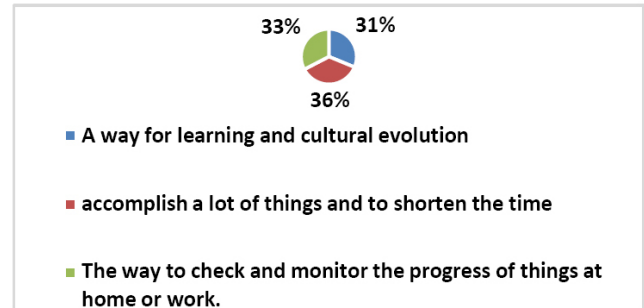


Figure 6. Benefits of Mobile Device Usage for the Less Than 18 Years Age Group.

### 4.3 Internet and Social Networks Interactive use View

The other view concentrated on appreciating the most activities performed by the users in internet and social networks for young's and elderly people. The selected users were addressed about the utilization of service of the internet and (80%) agreed while (20%) disagreed. The purpose of internet usage was (3%) for the internet services such as Call & Messages etc, (38%) for the internet applications (search for information) while (57%) for the social networks and (2%) for Other usage. Most of the internet specific applications users (54%) prefer to use social networks, while (14%) of them use internet services such as Call & Messages etc., (28%) use internet applications (search for information) and (4%) use others applications, while most of the internet services such as Call & Messages etc. users (33%) prefer to spend unspecified time using this facility and (23%) of the users spend 1-2 Hours, (26%) spend 2-6 Hours, (18%) spend over 6 Hours. It can be observed that most of the internet applications (search for information) users (45%) prefer to spend short time (1-2 Hours) on this facility, (29%) spend 2-6 Hours, (21%) spend over 6 Hours and (5%) spend unspecified time. For the time spent on social networks, there was (18%) of the users spend 1-2 Hours, (26%) spend 2-6 Hours, (15%) spend over 6 Hours and (41%) spend unspecified time. The most users (37%) spend 1-2 Hours on Others usage, (26%) spend 2-6 Hours, (16%) spend over 6 Hours and (21%) spend unspecified time. At the point when the users were addressed about the utilization of the primary capacities or benefits of using internet applications for the age groups that are less than 18 years, most of the users (38%) chose "Helps to learn and keep abreast of technological development". Figure 7

presents the benefits of using internet applications for the age groups that are less than 18 years<sup>27</sup>.

The main functions or benefits of using internet applications for the age groups that are above 55 years is “Allowed parents to recognize what is going on mind their children” as there were (38%) chose this answer, then (32%) chose “Create a kind of knowledge and learning in adults family members”, finally (30%) chose “Way a cultural evolution”.The effects for the use of a social networks by the age groups that are less than 18 years reflects that (40%) chose “Impact on the educational side”, (32%) chose “Easy win the cultures and customs of non-compatible” and (28%) chose “Creates social problems among family members”.The effects for the use of internet by the age groups that are above 55 years showed that (55%) chose “Difficulties for use and learn because of age and technological development”while (23%)chose “Cause jealousy among spouses and raises a lot of doubts and questions”, (16%) chose “Works to reduce social interaction and face-to-face” and (6%)chose “Easy deviation, and that the lack of great human experience”The other view concentrated on fathoming the most exercises performed by the users in HMI. Figure 8 shows the recurrence of the social networks utilize by the talked with users. It can be seen from figure 8 that most users (80%) utilize Facebook demonstrating its notoriety among others, When the users were addressed about the fundamental utilization of their social networks accounts, the results were: Reading updates (news, pictures) posted by my companions, Reading redesigns (news, pictures) posted by my family, Posting pictures of excursions, gatherings, and so forth., Posting upgrades about my life, Reading upgrades (news, pictures) posted by brands and organizations, Meeting individuals and Playing amusements. Table 1 shows the principle errands performed. It can be seen from Table 1 that (20%) utilizes the informal organization as a Reading redesigns (news, pictures) posted by my companions, (20%) Posting upgrades about my life, (16%) Meeting individuals, (14%) Playing diversions, (12%) Reading overhauls (news, pictures) posted by brands and organizations, (10%) Posting pictures of excursions, gatherings, and so on and (8%) Reading redesigns (news, pictures) posted by my family.

In view of the motivation of HMI study, a comparison, of the survey results of our carried out completed study,with the similar studies inBrazil and information in United States,<sup>5,6</sup> was done. The resultsare reported in Figure 9. The results showed that there are differences

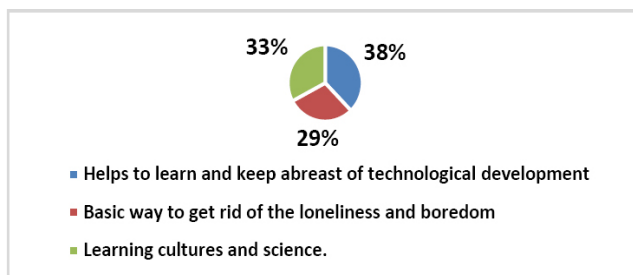


Figure 7. The Benefits of Using Internet for the Age Groups That are Less Than 18 years.

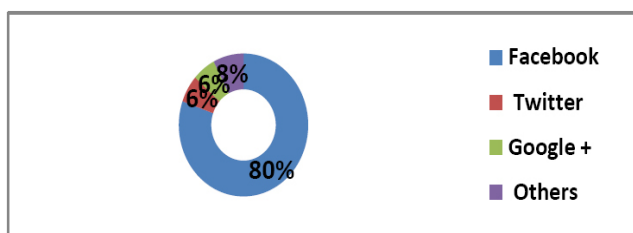


Figure 8. The Frequency of Social Networks use by the Interviewed Users.

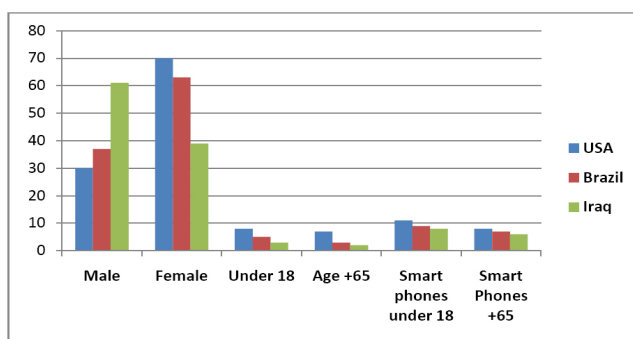


Figure 9. Comparison of Some Results Between Iraq, USA and Brazil.

Table 1. Main Social Networks Activities of the Questioned Users

Activity	Quantity	Total of %
Reading updates (news, pictures) posted by my friends	100	20
Reading updates (news, pictures) posted by my family	40	8
Posting pictures of trips, meetings, etc.	50	10
Posting updates about my life	100	20
Reading updates (news, pictures) posted by brands and companies	60	12
Meeting people	80	16
Playing games	70	14

between the selected countries, this is mainly due to the cultural differences between them.

## 5. Conclusions and Trends

The increasing in the use of technology milestones such as the social network and mobile usage is a known event to the attention for design special software that can be used for the users especially by young and elderly people. In this paper, the survey presented the process of using HMI on social networks by young and elderly people in Iraq. The outcomes indicate patterns, encounters and behavioral examples related just with the concentrated on gathering with the quantity of users overviewed.

However, the study can be considered as an underlying exploratory study to comprehend the utilization of HMI on social networks by youthful and elderly individuals in Iraq and the open new views for future research, improvement or adjustment of programming particularly for this gathering. The study demonstrated that other than the development, intellectual and discerning confinements, human connection with HMI on social networks with youthful and elderly individuals in Iraq and challenges particularly for users that can't read or do any activity. Subsequently, it is imperative to comprehend the utilization of excitement figuring youthful and elderly individuals, to grasp that social angles and clients involvement with innovation may meddle with the level of acknowledgment of another product or innovation.

The study demonstrated that the target of bringing up issues about the needs and challenges introduced by the talked with gatherings of users. Indeed, we can decide patterns and difficulties that must be considered in creating nations, for example, Iraq for social network situations. Furthermore concern the convergence of these with the developing number of HMI on social networks by youthful and elderly individuals in Iraq. Among them, we can highlight to evacuate of the hindrances that keep the connection of the by youthful and elderly individuals in Iraq by the appropriation of various systems of collaboration and their adjustment to these users.

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