What is the importance of GUI (Graphic User Interface) in facilitating ‘understanding’ for users in Pakistan?

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Dissertation Question

What is the importance of GUI (Graphic User Interface) in facilitating ‘understanding’ for users in Pakistan?

Abstract

Human beings are the ones who can create and understand visual communication.

Visual Communication can be found in various forms these days, from which one of the very interactive form is GUI (stands for Graphic User Interface). GUI (Graphic User Interface) is the interface through which we interact/communicate with computer systems/devices with the help of visuals on the screen. [Eg: In MS Word you know where to do what action through visuals on the screen i.e. GUI (Graphic User Interface), how to create new document, how to save, how to cut and paste basically complete call of actions. Same if you use facebook or twitter you are usually interacting or giving commands to computer through those visuals on your screen.]

This dissertation talks about the importance of the role of GUI in helping user understand and communicate with computer systems/devices in this age of new media and technology regardless of the language barriers.
Introduction

This is based on how the GUI (Graphic User Interface) design plays its role in communicating with users and in Pakistan. Since GUI (Graphic User Interface) is a very important part of Communication Design I would like to start with some introduction of Communication Design. Communication Design is all about creating visuals for communicating a message to masses or some number of people based on the requirements of the message sender. This visual communication can be done through various design mediums includes photography, videography, graphic design, typography, pictograms, ideograms, symbols or as simple as a sketch.

GUI (Graphic User Interface) is one best example of Communication Design which not only communicates a message to user but it actually makes them interact with the application/software through the signs, symbols, colors, graphics, icons and each and everything comes under GUI (Graphic User Interface). GUI (Graphic User Interface) is the interface which we as user use to send commands to computer applications/softwares, GUI stands for Graphic User Interface which is used to communicate with users regardless of literacy factor and language issues. GUI (Graphic User Interface) are used in mobile phones, ATM machines, desktop applications, websites, web based applications, mobile application, tablet personal
computers, computer software eg: MS Office or even your internet browsers such as Internet Explorer, imagine a Microsoft Word without any graphics and just text which can only operate able by literate people or someone who only understands English language.

GUI (Graphic User Interface) helps user to understand the functionality of the application/software either the user is using a mobile phone or an ATM machine. Even websites are also based on GUI (Graphic User Interface), without GUI (Graphic User Interface) you won’t be able to perform any task when it comes to technology. GUI (Graphic User Interface) is the only thing that helps user understands how to communicate with a specific application, as mentioned above it is not necessary for the user to be literate nor even its limited to any language.

Everything on earth is based on cycle or you say it works in cycle process for example Human being in itself is based on cycle we sleep we wake up daily, sun rises daily and ends by evening, we eat daily, etc so this all is a cycle. GUI (Graphic User Interface) is the way through which we Humans can communicate and interact with automated machines like computers. This is also like a cycle: Human send commands to automated machine to perform any task, the machine reads what the user(Human) has sent to perform and then machine reacts to it accordingly. This all happens because of the HCI (Human-Computer Interaction) and HCI (Human-Computer Interaction) is possible only because of GUI (Graphic User Interface).

Theres a language between every two communication mediums, so GUI (Graphic User Interface) is the only way we can communicate with the automated machine and computer/computerized applications.
Now based on the question above I am discussing what is the importance of GUI (Graphic User Interface) in facilitating ‘understanding’ for users in Pakistan.

As you know in general if we see our 96.5% of population is illiterate, which is a huge number of people actually whole Pakistan because 3.5% is not a number to be considerable. Even then we are the 3rd largest country in world which uses mobile phones to communicate. It may not the literacy factor.
Literature Review

What is GUI?

“A graphical user interface (GUI) is a human-computer interface (i.e., a way for humans to interact with computers) that uses windows, icons and menus and which can be manipulated by a mouse (and often to a limited extent by a keyboard as well).

GUIs stand in sharp contrast to command line interfaces (CLIs), which use only text and are accessed solely by a keyboard. The most familiar example of a CLI to many people is MS-DOS. Another example is Linux when it is used in console mode (i.e., the entire screen shows text only).

A window is a (usually) rectangular portion of the monitor screen that can display its contents (e.g., a program, icons, a text file or an image) seemingly independently of the rest of the display screen. A major feature is the ability for multiple windows to be open simultaneously. Each window can display a different application, or each can display different files (e.g., text, image or spreadsheet files) that have been opened or created with a single application.

An icon is a small picture or symbol in a GUI that represents a program (or command), a file, a directory or a device (such as a hard disk or floppy). Icons are used both on the desktop and within application programs. Examples include small rectangles (to represent files), file folders (to represent directories), a trash can (to indicate a place to dispose of unwanted files and directories) and buttons on web browsers (for navigating to previous pages, for reloading the current page, etc.).

Commands are issued in the GUI by using a mouse, trackball or touchpad to first move a pointer on the screen to, or on top of, the icon, menu item or window of interest in order to select that object. Then, for example, icons and windows can be
moved by *dragging* (moving the mouse with the held down) and objects or programs can be opened by clicking on their icons.”


Adobe Photoshop’s Graphic User Interface (GUI) design.

Graphic user interface (GUI) is basically the graphics on your screen, any sort of computer screen (desktop computer, laptops, tablet PCs or mobile devices) which allow user to communicate with the computer. Microsoft Windows and MAC OS are both the biggest examples of Graphic user interface (GUI) design, it is only the design of the interface through which users communicate with the computers. The whole idea for Graphic user interface (GUI) design is to make the Human-Computer Interaction more efficient without any language barriers.
Microsoft WORD’s Graphic User Interface (GUI) design.
Different Mobile Phones Graphic User Interface (GUI) design.
Facebook’s Graphic User Interface (GUI) design.

“Graphic user interface (GUI), a program that enables a person to communicate with a computer through the use of symbols, visual metaphors, and pointing devices. Best known for its implementation in Apple Inc.’s Macintosh and Microsoft Corporation’s Windows operating system, the GUI has replaced the arcane and difficult textual interfaces of earlier computing with a relatively intuitive system that has made computer operation not only easier to learn but more pleasant and natural. The GUI is now the standard computer interface, and its components have themselves become unmistakable cultural artifacts.”


Graphic User Interface (GUI) is also known as Graphical User Interface and User Interface (UI)
“When user interacts with computer system, they do so via User Interface (UI)"


**What is the importance of User Interface?**

“HCI (Human-Computer Interaction) is the study of how human interact with computer systems. Many disciplines contribute to HCI (Human-Computer Interaction) including computer science, engineering, graphic design. HCI (Human-Computer Interaction) is a broad term that covers all aspects of the way in which people interact with computers. In their daily lives, people are coming to contact with an increasing numbers of computer-based technologies. Some of these computer systems, such as personal computers, we use directly. We come into contact with others systems less directly for example, we have all the seen cashiers use laser scanners and digital cash registers when we shop. And, as we are all too aware, some systems are easier to use than others.”


As mentioned in ‘User Interface Design and Evaluation’ the HCI (Human-Computer Interaction) is the whole study of how human interacts with computer or computer generated applications/software. Many different disciplines contribute to this HCI
Human-Computer Interaction) such as computer science, engineering, graphic design etc. HCI (Human-Computer Interaction) contains all the ways that Human used to communicate with computer. In our daily life these days we are so much used to computer technologies, computers, cellphones etc where we need to interact with computers daily, whether we are student, professionals, executives, businessmen, professor, engineer, surgeon or anyone else HCI (Human-Computer Interaction) is in our daily life routine. Now coming to how the users (i.e. we Humans) interact with a machine called computer. In early ages humans used signs and symbols to communicate messages and they also use signs, symbols, icons for giving each other directions, this is when there were no concepts of computers in Stone Age. Then further as time passes things were getting better so as the communication design and the concept of using signs, symbols, graphics to give directions and to communicate continues and still exists. Now days when computers are something which is in our daily life routine, the same concept of symbols, graphics and icons continues to communicate users. That is called GUI, GUI stands for Graphic User Interface, GUI (Graphic User Interface) is the whole set of symbols, graphics, icons, pictograms which appears on your computer screen and communicates and give you directions on how to interact with computer. For example right now if you are viewing this document on computer on Microsoft Word the whole area on your screen is GUI (Graphic User Interface) which helps in HCI (Human-Computer Interaction). GUI (Graphic User Interface) is a very important itself and a important part of HCI (Human-Computer Interaction) its not only limited to Microsoft Word or any computer application/software, its everywhere these days the inventions and new technology is not even possible without GUI (Graphic User Interface). GUI (Graphic User Interface) can be found in every discipline in Hospitals, all the computer equipment there, in schools/colleges/universities all the data management on
computers, in advertising agencies all the designing being done using different applications/softwares which uses GUI (Graphic User Interface).

User-centered/User-friendly GUI (Graphic User Interface) design

“A good user interface caters to end users and supports them in the tasks they wish to undertake. A computer system that is developed without a good knowledge of the user and what they want to do with the system may be usable in that it can be used to so something, but it may not do what the users want to do in order to achieve their goals. The system will be usable, but not necessarily useful. This is not to say that all computer systems have to be designed to accommodate everyone. Computer systems should be designed for the needs and capabilities of the user for whom they are intended. Ultimately, a user should not have to think unnecessarily about the intricacies of how to use a computer unless, of course, that itself is the user’s task.”


Everyone loves friends and making friends, how about making an automated computerized machine a friend. Based on the information on GUI (Graphic User Interface) its quite clear how the GUI (Graphic User Interface) helps user understand. User-friendly GUI (Graphic User Interface) is an interface that can be easily understandable by users and through which a user can operate an automated machine, that is something very easy to use for any age of user, use of standard formats for structures in GUI (Graphic User Interface) can also make the GUI (Graphic User Interface) very user-friendly although this is not the only fact that can make GUI (Graphic User Interface) user-friendly. There is a reason why we use well knowned
softwares/desktop applications, website and cellphones, which is not because everyone uses it, there are a lot more hundreds of softwares/desktop applications, cellphones and website in market those are much more good looking or cheaper then these of softwares/desktop applications, cellphones and websites we use like if take some of the top lined of softwares/desktop applications, cellphones and website names that we use in our daily life and in profession could be Adobe Photoshop (for image/photo editing purposes), Microsoft Internet Explorer (for browsing websites on internet), Microsoft Office Word, Nokia, iPhone, Facebook and Youtube from websites. The reason is these of softwares/desktop applications, cellphones and website uses very affective GUI (Graphic User Interface) that is the reason these softwares/desktop applications, cellphones and website became very famous and successful, the functionality and the GUI (Graphic User Interface) is so easy to use (in other words is user-friendly). Lets take example for Nokia phones, nokia phones are the top selling phones in sub-continent its not just the price, yes it does matter but the other thing is its GUI (Graphic User Interface) which is so user-friendly, if you notice Nokia uses the same format, the standard structure when it comes to GUI (Graphic User Interface) in almost all of their portable telecommunication device called mobile phones. So that the users don’t have to face trouble switching to the new models, the icons symbols and signs in the Nokia’s GUI (Graphic User Interface) keeps on improving in quality and feature wise but the user-friendly structure for GUI (Graphic User Interface) remains the same. There are also other great examples you can see facebook which keeps on changing but in terms of interactivity and GUI (Graphic User Interface) it won’t change drastically. That’s the reason that users can easily switch to the new GUI (Graphic User Interface) of the website and still they feel very comfortable with the GUI (Graphic User Interface) yes in this case for facebook website in the beginning when the facebook used to change the GUI (Graphic User Interface) people were very disappointed but even then the GUI (Graphic User Interface)
Interface) is so affective that the users get used to it very easily and now this network is growing and growing. The all top lined names mentioned above are just because of their user-friendly GUI (Graphic User Interface) otherwise there are a lot more of softwares/desktop applications, cellphones and websites available in the market in much more cheap rates and more good looking, but it’s not the game of good looking it’s the game of user-friendly interface/communication design.

**Visual Communication, GUI for Illiterate Population**

“The brain adds information to the raw visual impressions, which gives a richness of meaning far beyond the simple stimuli it receives.” – Robert Solso, *Cognition and the Visual Arts*

“The study of visual communication has come full circle as an essential component of becoming an educated individual. During the 19th century, cultivating artistic ability was standard: People considered “educated” were “visually literate” in the sense that they could “read and write” a visual language. Often that “language” was one or more of the fine or performing arts: A well-educated person could interpret and discuss works of art, as well as paint, or draw, or perform music or poetry – at least on basic levels. In today’s world, however, college students usually take a minimum number of arts area courses as part of their undergraduate curricula. Few learn to use a visual medium with proficiency, and even fewer extend visual learning at graduate and
postgraduate levels. Ironically, as visual education has been pushed to the periphery of the core curriculum in higher education, the need for visual literacy has grown exponentially.”


GUI (Graphic User Interface) for literate population is not any hard job but the job is GUI (Graphic User Interface) for illiterate population. GUI (Graphic User Interface) is all about graphics and symbols which gives you directions and signs. In early ages Human used pictograms, icons, symbols and signs to communicate, even their language involves all of these pictograms, icons, symbols and signs. If you see some of the old languages you will find a lot of graphics and symbols, later on the typeface came into being. Now what are typefaces? This is not something alien from graphics, typefaces itself are symbols and graphics, each and every alphabet/letter is a symbol. Its just that because this has been registered in our minds and its so affective and powerful that we have left the meaning behind all of this. The documents, the text and everything is all based on symbols and a major part of communication design. Typefaces are the very best example for communication design which means design to communicate. This is the time when it reminds us the history, GUI (Graphic User Interface) can be revolutionary in terms for illiterate populations. As mentioned in previous sections that GUI (Graphic User Interface) is not based on any language, now I say it is itself a language to communicate with all kind of people, regardless of the language, age and races. In GUI (Graphic User Interface) while designing the priority is not the language the main thing is the GUI (Graphic User Interface) itself. How many mobile phones you see available in every language? Did you find a sindhi
version for mobile phones yet? But yet the people used to speak sindhi language are using the mobile phones and other automated machines like computers etc even the fact is that they only knew sindhi language. (Talking about the illiterate population). The question is how and the answer is GUI (Graphic User Interface). GUI (Graphic User Interface) is the only thing which helps even the illiterate population to understand how to communicate with the automated machines. Its just like and illiterate person understands the signboard where its written PCO not because its written PCO at the calling centers (where public can go can make calls by paying) its because theres a phone symbol next to the letters P-C-O. Same in the automated machines with the help of user-friendly GUI (Graphic User Interface) any illiterate person can understand which icon/button to be pressed for sending message or checking inbox in mobile phone or to make calls.

We have good percentage of population which is illiterate, which is a huge number of people actually whole Pakistan. Even then we are the 3rd largest country in world which uses mobile phones to communicate. It may not the literacy factor – it is the GUI factor.
Research Methodology

According to the question “What is the importance of GUI (Graphic User Interface) in facilitating ‘understanding’ for users in Pakistan?” my research is based on some books which has been written on GUI (Graphic User Interface) and evaluation, the design, the interactivity through design:

Books:

User Interface Design and Evaluation
Authors:
Debbie Stone (The Open University, UK)
Caroline Jarrett (Effortmark Limited)
Mark Woodroffe (The Open University, UK)
Shailey Minocha (The Open University, UK)

Visual communication: integrating media, art, and science.
Authors:
Rick Williams
Julianne Hickerson Newton

Interviews:

The research is also based on couple of interviews from the companies who are actually designing the GUI (Graphic User Interface) over here in Pakistan. I have planned an interview with:

WHO:
Mr. Hameed Khan (CEO – Proximate Global, Inc.)

The owner of PGI Proximate Global, Inc which is the company based in New York and Karachi, the founder and CEO of PGI Proximate Global, Inc is Mr. Hameed Khan who studied from Yale University. Hameed Khan graduated from Yale University in 2000 with a double major in Economics and History.

WHY:

The reason why I have chosen this particular person to be interviewed and perfect for my research is because this company PGI Proximate Global, Inc. has recently launched a real-time location based social networking mobile application called face2face, which helps you find and interact with people around you using your smartphones and GPS (Global Positioning System) in your mobile phones. Face2face has been launched in Pakistan in beta phase and in New York too. But Hameed Khan is planning to re-launch the application in Pakistan after optimizing it based on the user facts here in Pakistan. I had taken his interview few days ago where he mentioned the reasons why he is planning to re-launch his face2face application in Pakistan, because since he launched it few months ago the response here in Pakistan is not so good that is due to application has been designed for Blackberry, iPhone and Google Android phones which is obviously not what our masses use. He says the product/application has been redesigned for Nokia phone and ready to launch, because Pakistan has very high number of Nokia users. So the company is expecting more response this time.

WHO:

Mr. Abdul Qadir M. Siddiqui (Information Designer, Creative Chaos)

Mr. Abdul Qadir M. Siddiqui works in Creative Chaos (Pvt) Ltd. as User
Interface/Communication designer studied from Virtual University of Pakistan also currently doing his MBA Marketing from Iqra University.

WHY:

The reason why I have chosen Mr. Fursid for my research interview is because he is one of the finest professional who works on GUI (Graphic User Interface) designs here in Pakistan, working in a company called Creative Chaos (Pvt) Ltd. This person has worked on projects for Telenor Pakistan, Standard Chartered Bank, Coke Studio, Unilever etc. Have great experience about GUI (Graphic User Interface) designing here in Pakistan.

Also my research is based on some practical experiments with normal users based on GUI (Graphic User Interface) and some other interviews from few industry experts. Secondly the research is also based on university blogs, internet research and authentic electronic versions of Books. All the research is based on facts and authenticity.

**Interactive Experiments/Interviews:**

As mentioned above I have also conducted interactive live experiments followed by the interviews of candidates.

**First Experiment:**

This is also a real time experiment, in this experiment I have used the very famous website ‘Facebook’ applications icons to find out how a normal user can understand the meaning of those icons and what the user understands is what actually facebook
designed
those icons for.

Second Experiment:
3 weeks illustration block, with restrictions to software/application we used to design
generally.

WHO:
Aisha Saiyed, Amna Naseem, Urshella Riaz Notta
Communication Design students

WHY:
This was actually our block that happened in our 7th Semester, the reason why I have
included this as an experiment in my documentation is because this is very much in
connection with my dissertation. In this block for Illustration Minors we were given 3
assignments for 3 weeks, the assignments are challenging because we were not
allowed to use any application/software that we have been using since we started
designing. We were extremely restricted to use entirely new softwares which we have
never experienced in life, the students faced a lot of difficulties in producing work
with these unfamiliar applications. Now why they are uncomfortable in switching new
applications you can find below.

Findings

Interviews
Based on the interviews I have conducted with the people mentioned in my Research
Methodology, I educated myself with these findings:
• The application/GUI (Graphic User Interface) designers/design companies follow the standards of GUI (Graphic User Interface) which is being followed by most of the design companies so that they are universally acceptable, one of the example that one of my interviewee gave is

_Eg: Play button which is the most basic and simplest shape design wise but it instantly recalls your mind what this button displaying a play icon will do._

They also mentioned that they use the standards based on the past, what the users have been using or used to it, in other words user feels comfortable using applications/software designed on the same structure.

• Most of the designers usually avoid completely different interface design, they make changes to visual in a sense so that user feels like they are using something new. Its also because of the user comfort-zone which has been set by the trend setters who invent and initiate such technology like Apple and HTC. But they need to change the interface design when technology shifts (eg: First there were applications for iPhone but now since different technologies has been invented so you can now find the same applications on different platforms such as iPhone, iPad)

• A normal user cannot easily switch OS (Operating System), because the one he/she is already using he/she is expert in that operating system, they get used to the GUI (Graphic User Interface) of that OS and can perform task more quickly on that operating system than anything else. Switching OS (Operating system) is like switching your parent country.
Major and most famous websites like facebook keeps on doing a lot of researches and testing before making any change. The reason why facebook still successful with changing their GUI (Graphic User Interface) in very short periods is they keep their 80% core elements accessible even if they change the GUI (Graphic User Interface).

According to their researches they work more on visuals then a language. Also the GUI (Graphic User Interface) designers these days working on to completely eliminate the use of language and play only with visuals.

Anyone can see and understand anything but not everyone can read and understand everything. Visuals play more than a language if we are talking about communicating.

The GUI (Graphic User Interface) designers these days have beta testers but since they have designed applications for international level they didn’t actually have involved illiterate or Pakistani users as their beta testers.

Interactive Experiments

First Experiment

For interactive experiment I have chosen and used the following visuals from the most famous website i.e. facebook for my experiment that I have conducted with difference kind of users i.e. facebook user and non-facebook user (or the one who hardly uses facebook)
Non-Facebook User: Thinks this is a symbol for two people or friends.
Facebook User: Thinks this is a symbol for friends. According to Facebook this is an official symbol used for friends on Facebook.

Non-Facebook User: Thinks this is a symbol for some communication.
Facebook User: Thinks this is a symbol for Facebook wall. According to Facebook this is an official symbol used for Facebook wall where users can leave messages to communicate in real time.

Non-Facebook User: Thinks this is a symbol for photos.
Facebook User: Thinks this is a symbol for Facebook photo albums. According to Facebook this is an official symbol used for Facebook photo albums where users upload and share their photos with friends.

Non-Facebook User: Thinks this is used to add one person to a person.
Facebook User: Thinks this is a symbol for friends’ requests. According to Facebook this is an official symbol used when a user adds another user on Facebook as his/her friend.

Non-Facebook User: Thinks this is a notice board.
Facebook User: Thinks this is a symbol for Facebook notifications. According to Facebook this is an official symbol used for notifying users about their and their friends’ activities on Facebook.

Non-Facebook User: Thinks this is day, calendar.
Facebook User: Thinks this is a symbol for events on Facebook. According to Facebook this is an official symbol used for events on Facebook.
Non-Facebook User: Thinks this is a visual representation of a person.

Facebook User: Thinks this is a symbol for facebook user. According to facebook this is an official symbol used for a single user/person on facebook.

Non-Facebook User: Thinks this is a graduation cap.

Facebook User: Thinks this is a symbol for some educational thing. According to facebook this is an official symbol used for educational information on users’ profile on facebook.

Note: For this visual which is a screenshot of facebook’s iPhone application, the users were asked to tell what are the possible interactions that this Graphic User Interface (GUI) is communicating.

User: The top right + sign is for adding something or go to the next step or menu, then there is a search bar to find messages/activities on facebook. All the icons are supported by text below yet they are communicating the message without the supportive text. At the bottom the button which if we tap would show the notifications.
Second Experiment

We had our illustration minor course in our 7th Semester, the reason behind why I have included this as an experiment in my documentation is because this is very much related to my dissertation question. In this Minor workshop we were given 3 assignments for 3 weeks, the assignments are challenging because we were not allowed to use any application/software that we have been using since we started designing. We were extremely restricted to use entirely new softwares which we have never experienced in life, the students faced a lot of difficulties in producing work with these unfamiliar applications. Now why they are uncomfortable in switching new applications you can find below.

Based on the interviews I have conducted with the students mentioned in my Research Methodology, I educated myself with these findings:

- The students don’t know how to use those new applications/softwares, they were very much used to the standard softwares like Photoshop, Illustrator because they have been using these since 3 years or more and are very familiar with the functionalities because of the Graphic User Interface (GUI).

- The productivity time will increase if users will try to use softwares having a Graphic User Interface (GUI) which is different from the standard/usual softwares. Switching softwares/application in terms of productivity is also not a good option due to the user friendly Graphic User Interface (GUI).

- The communication designers are not really accepting the switching of softwares for clients work because of unfamiliar Graphic User Interface (GUI) design. But some of them are open only for experimentation and learning
purposes. Not their preference.

Analysis

After going through all of my research and findings i can say there is definitely very much importance of Graphic User Interface (GUI) in facilitating understanding for users in Pakistan, infact Graphic User Interface (GUI) is playing a very important role in our daily lives, in production in our industry in each and every section every business and every educational system everything is full of Graphic User Interface (GUI) communicating between Human beings and Computer Systems. Graphic User Interface (GUI) could be found in many mediums such as Graphic User Interface (GUI) in Mobile Phones, in websites, in computer software/applications, in Automated Teller Machines (ATMs) and many other mediums as well.

GUI (Graphic User Interface) in Mobile phones has been used since the invention of mobiles, which helps users to send commands to this small telecommunication device called mobile/cellphone to communicate with their friends, family or coworkers. In the beginning when the mobile phone was invented (by Dr. Martin Cooper, a former general manager for the systems division at Motorola, the first really portable phone for the general public was produced in 1985 by Vodaphone.) since that time GUI (Graphic User Interface) is a part of mobile phone. GUI (Graphic User Interface) helps users understanding the way to communicate with the device, how one should communicate with this portable device. GUI (Graphic User Interface) in mobile phones is one of the best examples for how it has brought change in the ways people used to communicate. GUI (Graphic User Interface) is the way which lets human interacts, even at early ages of mobile phones when there were only black and white screen phones which only display very digital graphics in single color on very small screens that also used GUI (Graphic User Interface) to communicate with users and
help in HCI (Human-Computer Interaction). It is also proved that GUI (Graphic User Interface) communicates with users regardless of the language issues, usually all companies work on universal language and create their product based on the same language but GUI (Graphic User Interface) even in English language can be understandable by the users in any language. As mentioned above like in old mobile phones which only shows simple menus using GUI (Graphic User Interface) which includes symbols/icon like message icons/symbol, inbox icon/symbol, send/receive calls or as easy as settings icons/symbol these are all the part of GUI (Graphic User Interface). Imagine mobile phones without any graphics that give you any directions or interact with you, each and every cellphone has been designed highly based on interactivity and each and every graphic, symbol, icon used in GUI (Graphic User Interface) were being designed very carefully after a lot of research, each and every action which helps user interaction in GUI (Graphic User Interface) were designed pixel by pixel, it seems very minimal and easy graphics but they are not. Each and every symbol the overall feeling of that user experience while using the cellphone has been pre-tested before making it available to public, GUI (Graphic User Interface) in mobile phones are so impact-full that they have very strong capability to change the users mood. For example if a user wakes up in the morning and open up his mobile phone having 4.2 inches LCD display, will he feel better if the GUI (Graphic User Interface) appears at time would be in bright red color and icons with some odd graphics, its so obvious that nobody will like such kind of user interface. The GUI (Graphic User Interface) in mobile phones is something that user loves to use, and enjoys every time as he or she use it. Also it is that much affective that even in emergency cases users mind can understand quickly how to operate such device. That is all happens because of some good graphics in GUI (Graphic User Interface) of mobile phone that has been registered in your mind. A user already knows which icon on the cell phone should be pressed to make phone call in just one tap/touch. In any
mobile phone no matter its touch screen or an old odd heavy phone, its all about GUI (Graphic User Interface) that makes it all happen and helps the user understand that how to operate or send command to this small portable computer machine called mobile phone these days. These days there are many kind of mobile phones, one good example is iPad that is just larger version of iPhone but it all is the game of GUI (Graphic User Interface).

GUI (Graphic User Interface) in ATM (Automated Teller Machine) is very affective. Now a days ATM (Automated Teller Machine) is a very useful thing, each and every one no matter from a servant, maid to upper class businessmen running huge businesses even the companies everyone uses ATM (Automated Teller Machine) without ATM (Automated Teller Machine) there can be no banking these days where everything is so fast and affective, who wants to wait in line in Banks to get their own money into their pockets, this ATM (Automated Teller Machine) solved this problem and this is one of best inventions around these days but it all based on GUI (Graphic User Interface). Again the GUI (Graphic User Interface) wins the game here too. ATM (Automated Teller Machine) is completely works on HCI (Human-Computer Interaction) where the same thing as in mobile phone happening here. Users can find ATM (Automated Teller Machine) centers where these automated machines have been installed, these places are usually near banks or inside bank, you can also find ATM (Automated Teller Machine)s in large shopping malls and fuel pumps too. Now coming to the interactivity part where the user actually interacts with this ATM (Automated Teller Machine), user simply insert their ATM (Automated Teller Machine) Cards [provided by the bank, these cards could be one of MasterCard, VISA card or AMEX (American Express) and belongs to 1link or MNET] right after inserting they can see the screen prompting to enter their password and other verification information, after doing all this the main screen with GUI (Graphic User Interface) appears which communicate with user so that the user can understand
which button to tap, touch or press to send command to the machine and gets whatever he/she wants that could be the balance inquiry, bank account statements, transaction history or the most important thing is to withdraw money and fast cash. Some of the machines has buttons outside the screen/display area but that were old machines, the all new machine is fully based on touch screen system where all the GUI (Graphic User Interface) appears. It is so affective that a person who not that much computer literate can easily understand how to use this ATM (Automated Teller Machine) just because of it very affective and well-designed GUI (Graphic User Interface). Again in this ATM (Automated Teller Machine) each and every graphic used in GUI (Graphic User Interface) has been designed with a lot of research practical beta testing.

Websites are also completely based on GUI (Graphic User Interface). GUI (Graphic User Interface) is the only thing that helps you work on the website, interact with website and do more with the website. There are many famous websites that sets perfect examples of how the GUI (Graphic User Interface) help user to understand the website and operate the website according to it. Websites were simple documents before in early ages of websites, those simple documents were like Microsoft Word documents or other text documents that can be shared on local networks, then the networks spreads from local intranet to internet which is a network that whole world can access so as those text documents. Then different group of communication designers, scientists and people from information technology/computer sciences formed organizations which works on how to make this thing websites more interactive and more engaging for users. These days you can see those text documents has now formed into high end dynamic websites where millions and millions of interactions, not only interaction but real-time interaction happening in a minute, how is this came in being? How the people started interacting with websites? This is all because of GUI (Graphic User Interface), if you see websites these days are full of
graphics, no website you will see without any graphics. This is the GUI (Graphic User Interface) that helps user understand where to find what things on the particular website, if you are on any restaurants website may be you’re looking for the menu or the location, due to GUI (Graphic User Interface) you will be able to find whatever you are looking for on that website. Some general examples are: if you are anyway in the middle of the website, or some other page of the website and you would want to go to the home page of the website you will possibly look for a small hut icon which is a part of GUI (Graphic User Interface), if you are on a website and you want to contact the website company you will look for the small envelope icon, if you want to search something you will first look for a small icon portraying magnifying glass, these all are the part of GUI (Graphic User Interface) and it’s the GUI (Graphic User Interface) designer who places this on right position so that to user can see. We can take the worlds most famous and successful and the fastest growing website Facebook as an example which people says that’s uses very minimal graphics, yes facebook has used very minimal graphics but it nothing that’s has done with user interface, a website like facebook also fully filled with GUI (Graphic User Interface). Today a computer –literate user knows very well how to use facebook, all the GUI (Graphic User Interface) that helps user understand how to post something on wall, or to share or upload photos on facebook. Its all because of GUI (Graphic User Interface) which includes icons, symbols, signs etc which indicate or guide user on how to do what. If you are a user of facebook you know how to post something on the wall or to upload photo because of those tiny icons/symbol that in the design of facebook’s GUI (Graphic User Interface).

Computer Software/Application (also known as desktop applications such as Photoshop, MS Office etc) which also known as desktop applications are one of the finest invention in computer desktop solutions. The softwares are the programmed system works on computer which requires commands from users to perform any task,
this is something similar to ATM (Automated Teller Machine) and portable
telecommunication devices known as mobile phones or cellular phone which is based
on GUI (Graphic User Interface) and HCI (Human-Computer Interaction) (HCI which
itself based on GUI). This desktop application totally works because of GUI (Graphic
User Interface) which helps user understand the software, for example if you take
Microsoft Word (which is a software/application which we all use in our daily
routine) the overall operation of Microsoft Word is based on GUI (Graphic User
Interface), this is GUI (Graphic User Interface) which help you understand the
functionality of this software, how to save the document (this is something you know
because of the graphical icon representing/helping you understand that you should
press this to save your document). The same things goes with each and every function
you perform, for example cutting and pasting in a Word document, its all being
directed by the GUI (Graphic User Interface) of the Microsoft Word. How to format
text, how to add colors, how to change background everything is being properly
defined by the GUI (Graphic User Interface) which include all those graphical
elements which you see on your screen like: icons, symbols, signs and other
additional graphics. Softwares/Desktop applications are being used worldwide from
small companies to giants, all these new inventions each and everything are based on
desktop application/software, without softwares/desktop applications today you can’t
do anything and this is all the game of GUI (Graphic User Interface), if there’s a good
GUI (Graphic User Interface) design you will be able to interact with the
application/software more quickly and produce perfect results. Even if there were no
concept of GUI (Graphic User Interface) we won’t be able to produce what we are
producing right now. Theres a language between every two communication mediums,
so GUI (Graphic User Interface) is the only way we can communicate with the
automated machine and computer/computerized applications. Even the Computer OS
[(Operating System) for example Microsoft Windows, Apple MAC iOS, Redhat
Linux, Google Android are the most famous operating systems] are the very good example of computer softwares and also a very good example example for GUI (Graphic User Interface), each and every action you do on this computer OS (Operating System) is all because of the GUI (Graphic User Interface) that helps you to understand how to communicate with this automated computer program called desktop application or software.

To further get categorically local opinions on this I have conducted different experiments and interviews with industry experts and normal users such as students etc. One of the great experience and learning is with Mr. Hameed Khan (CEO at Proximate Global, Inc) who introduced real time location based mobile application on international level that has never done before in Pakistan or in the neighbor countries.

Once the user starts working on an application with a good Graphic User Interface (GUI) design the user gets familiar with it and its hard to switch to other application with different Graphic User Interface (GUI), its not like the new applications/software companies or coming up with the Graphic User Interface (GUI) which are not very effective but its that the pioneers are taking benefits, its like the car you are familiar with eg: we know in our cars where the accelerator is, the clutch is, where are the gears and where is the handbrake who would want to switch to a new car with completely new systems which are above the standards. Or the other example could be how about if Microsoft launch a new version of windows where the taskbar is right at the top with very different visuals, would you feel comfortable working with it? Many says no they wont. Here is one of the very biggest example when Windows XP came out with all new exciting graphics which are complete revamped version than Windows 98, the best users of Microsofts took around 5 years to accept that its actually a good Windows operating system, its not because the system is faulty it is because the users or not used to those attractive graphics. There is a reason why every
other mobile company is following the touch screen Graphic User Interface (GUI) standards that Apple used in their first iPhone, now you see each and every touch screen phones uses the same standard, the icons and visuals are slightly different but they are almost the same and in the same placements.

Graphic User Interface (GUI) is the only thing that can communicate between computer and Human being which is technically called Human Computer Interaction (HCI), these days the whole world is working in this basis, this case has not been covered much specially in our country where usually people don’t understand what communication design is all about and what is the graphic designers job in this situation the Graphic User Interface (GUI) design is simply and alien language, ofcourse there are people who understand this but due to the literacy and computer literacy rate in our country this is a very un-common knowledge that you can expect anyone to aware of. But still it exists and its working very well, the best example is that Pakistan comes in one of the lowest literate countries of the world yet it is one of the top ten countries of mobile users, is it the literacy factor or the GUI factor? Definitely it’s the Graphic User Interface (GUI) design factor which is playing very important role in communicating with every kind of audiences.

**Conclusion**

I would like to conclude this with following words: GUI (Graphic User Interface) is a very wide range and there’s a lot to come in future, what I have discovered while researching and working on my dissertation that GUI (Graphic User Interface) is very useful in everyones daily life, everyone in some way or the other do interact with computers systems, no matter they are desktop computers, mobile phones or any other
computer device. GUI (Graphic User Interface) plays a role of communication between Human and Computer Systems and this communication uses detailed visuals, this doesn’t mean heavily illustrated material this could be a 16x16 pixel icon that communicates the whole function/message through which human can interact with computer systems (as mentioned above this is called HCI Human Computer Interaction). There’s a lot of work going on GUI (Graphic User Interface) worldwide but in Pakistan the consumer rate is very high but not the designing of GUI (Graphic User Interface), in our country hardly an average person could understand what does communication design means and this is an advance version of communication design which is called GUI (Graphic User Interface). What I learned in Pakistan this field is being completely ignored, there no such education which specializes in GUI (Graphic User Interface) as well as there are not much professionals who are working on GUI (Graphic User Interface), even those who are working they don’t even know the term. In Pakistan a lot of development is in process, I have met quite a few people who are going to make it on world level, but right now there is no such awareness of GUI (Graphic User Interface) design.

What I also learned is GUI (Graphic User Interface) is the future for everything. Everything will be on screens and this is the one good thing which eliminates the language barriers. GUI (Graphic User Interface) is the next level thing where user can communicate with only and only visuals and no supportive text. If there were no GUI (Graphic User Interface) designs I can say definitely we are not able to reach the positions where we are right now, its just like your sense helps you to interact with the world.
Appendices

Interviews

According to my interviews with the above mentioned people I documented following:

From Mr. Hameed Khan (CEO – Proximate Global, Inc.)

Q1. Why do you follow the standards of GUI (Graphic User Interface) design while preparing a mobile application?

Yes we follow the standards of GUI (Graphic User Interface) so that they are universally acceptable. Eg: Play button which is the most basic and simplest shape design wise but it instantly recalls your mind what this button displaying a play icon will do. We use the standards based on the past, what the users have been using or used to it, in other words user feels comfortable using applications/software designed on the same structure.

Q2. When you produce a secondary version of an application, why don’t you use a completely different interface design?

We usually avoid using completely different interface design, we make changes to visuals/icons in a way so that user feels like they are using something new, fresh and upgraded. Its also because of the user comfort-zone which has been set by the trend setters who invent and initiate such technology. Yes but one thing we need to change the interface design when technology shifts Eg: long time back we used to design applications for full touch screen phones like iPhone, then few years back technology changes and Apple introduces iPad which obviously won’t use the same version of application that we designed for iPhones, so in this case of technology shift we need
to use different interface. These days you will see one application for different platforms like for example take Gmail application, its different for Windows PC, Its different for MAC, its different for iPhone, its different for iPad, its different for Android phones, its different for Android tablet, its different for Symbian phones. The functionality is the same in all but the interface design is different based on the technology.

Q3. **Do you think a normal user faces discomfort ability when he/she switches the OS (operating system), eg: a Windows OS user to Mac OS? Why?**

Definitely, this is the time where everything is going so fast, new technologies, new inventions etc everyone is looking for ways to perform their jobs quickly. A normal user cannot easily switch OS (Operating System), because the one he/she is already using he/she is expert in that operating system and can perform task more quickly on that operating system than anything else. Switching OS (Operating system) is like switching your parent country.

Q4. **Facebook keeps on changing its GUI (Graphic User Interface) design, does that reflect (in increment or decrement) of facebook users in Pakistan? Why?**

Facebook keeps on doing a lot of researches and testing before making any change, it does not affect in increment or decrement of facebook users on Pakistan in countable numbers. The reason why facebook still successful with changing their GUI (Graphic User Interface) in very short periods is they keep their 80% core elements accessible even if they change the GUI (Graphic User Interface).
Q5. When launching a mobile application in Pakistan why don’t you prefer urdu as your application’s primary or optional language?

Well according to our researches we planned to work more on visuals then a language, more iconic language. Infact we are planning to completely eliminate the use of language in such applications, we are working on visual language. The priority is communicating the message, if the user understands visuals we use visuals. Every person from different nations speaks differently but sees the same, so why not show them what they all can see equally.

Q6. Do you think that visuals overcome the importance of language when it comes to facilitate understanding the users especially in Pakistan? Why?

Yes because (based on what we talked in the above question), anyone can see and understand anything but not everyone can read and understand everything. Visuals play more than a language if we are talking about communicating.

Q7. Knowing that Pakistan doesn’t have a good percentage of literate users you still launched the face2face application in Pakistan, why?

It’s not about literacy it’s about usability. Pakistan is the country which comes in top ten mobile user countries worldwide so here’s a huge market. Literacy and Education are two different things, literacy is the ability to do something in particular standards (eg: read or write) but in education anyone could be educated using language, audio or visuals. In Pakistan when user can make calls, send messages, use internet on mobiles by understanding all this through visuals then they can use any application based on visuals.
Q8. While working on your application’s GUI (Graphic User Interface) design did you consider the usability of your application for illiterate people?

We consider it but as we have discussed this in previous questions that we work more on visuals than a language to communicate with users. So at the same time it’s for literate and illiterate people as well.

Q9. Do you think your recent application’s GUI (Graphic User Interface) design facilitates ‘understanding’ for users in Pakistan? How and why?

Yes the recent one does a lot compare to previous one, because again here comes what we were talking about technology shift, we first launched here in Pakistan only for iPhone, Blackberry and Android users but then after our experience and research on our first launch. We learned that in Pakistan there are more users of Nokia than iPhone or Blackberry, so we design the interface for Nokia phones and re launched it here and so far it’s going good.

Q10. Who are your beta testers? Does it involve illiterate or Pakistani users? If yes then why?

Yes we have beta testers but since we have designed this application for international level we didn’t actually have involved illiterate or Pakistani users.

From Mr. Abdul Qadir M. Siddiqui (Information Designer, Creative Chaos Pvt. Ltd)

Q1. Why do you follow the standards of GUI (Graphic User Interface) design while designing an interface?
All standards are there for a reason. They're there after much study and experience for what works and what doesn't. The very reason we use GUI standards that are time tested and help improve the user experience.

**Q2. When you design a secondary version of an application/website, why don’t you use a completely different interface design?**

That is so that users don't get surprised or don't have to learn the new interface altogether from scratch. That's why we use similar layouts.

**Q3. Do you think a normal user faces discomfort ability when he/she switches the OS (operating system), eg: a Windows OS user to Mac OS? Why?**

Definitely. That is because if a user is used to of using an interface they know what to expect from the experience and where to look for what. After switching to a different OS it's a discovery method which takes time to adapt to new user interface.

**Q4. Facebook keeps on changing its GUI (Graphic User Interface) design, does that reflect (in increment or decrement) of facebook users in Pakistan? Why?**

Sometimes it does. Sometimes it doesn't. Depends on what sort of changes are introduced.
Q5. When designing an interface in Pakistan why don’t you prefer urdu as your application’s primary or optional language?

That's because of many factors that involve tools and infrastructure used to create UI in Urdu or any language other than English-like languages. We always do consider an alternate for other language.

Q6. Do you think that visuals overcome the importance of language when it comes to facilitate understanding the users especially in Pakistan? Why?

Visual appearance has far more effective impact than just text. However, both goes hand in hand. Visual appeal with well written content/copy is a good combination for successful communication.

Q7. Knowing that Pakistan doesn’t have a good percentage of literate users you companies still produce applications in Pakistan, why?

Literacy rate has nothing to do with usage of applications. Applications are used to solve problems/aid and support everyday tasks.

Q8. While working on GUI (Graphic User Interface) design did you consider the usability of your GUI (Graphic User Interface) for illiterate people?
Yes we always do. The usage of colors, designs and what overall message the application is communicating with the users is very important.

Q9. Do you think your recent GUI (Graphic User Interface) design facilitates ‘understanding’ for users in Pakistan? How and why?

After careful study of what is appreciated and is acceptable for Pakistani users, our recent apps has the facilitation for 'understanding'. By using colors, language, style and trends.

Q10. Who are your beta testers? Does it involve illiterate or Pakistani users? If yes then why?

Our beta testers are in-house QA team than the actual users who share their feedback. That depends on what sort of users are our target for the app.

Interviews for (First Experiment)

From Urshella Riaz Notta (Communication Design student)

Q1. What and why are the problems you faced in designing in this block?

I personally felt the difficulty in designing initially because knowing Photoshop and its variety of tools i felt i was being restricted by a smaller version with lesser options incise of using Corel painter. the program was slower as compared to Photoshop and
limited options were becoming a hindrance plus Corel files were occupying 4 times
the space on my hard drives as compared to PSD files. Though the art style and the
paint roughness was what i really liked about Corel and i wish we could paint in
Photoshop with similar painting brushes. One my priority in choosing Corel over art
rage was also that, that art rage though every one said was easier but i found it very
difficult to use it since it was completely new hence i preferred Corel since some of
the short cuts were the same as Photoshop hence little familiarity is better than no
familiarity at all especially when you have time constraints.

Q2. Will it take the same time to produce work as in regular softwares like
photoshop? Why?

No it of course will take lesser time to produce the same work in Photoshop, thats
because its faster than Corel has more options. and most importantly i am familiar
with Photoshop already.

Q3. Would you ever prefer to switch softwares from the usual ones to completely
news ones which you have never touched, to produce the clients work? Why?

No i think its not very wise to switch software just before producing a clients work
because you aren't familiar to it. i would only switch a certain software if i feel that a
certain feel can only be created in a certain software and that too if i don't have a lot
of time constraint.

From: Aisha Saiyed (Communication Design Student)
Q1. What and why are the problems you faced in designing in this block?

Using a new software is always difficult because we are suddenly out of our comfort zone. We are used to the placement of the tools and the handy shortcuts in softwares we have used before.

Q2. Will it take the same time to produce work as in regular softwares like Photoshop? Why?

Initially it will take us longer to produce the same work because we are still trying to understand the software. It is like driving a car, at first it takes a while to learn it but after some time it becomes second habit.

Q3. Would you ever prefer to switch softwares from the usual ones to completely new ones which you have never touched, to produce the clients work? Why?

It depends. If the new software is benefitting my work in any way I would definitely switch to the new one, I know I can learn to use it eventually until I am as comfortable with it as I was with the old softwares.

From: Amna Naseem (Communication Design Student)

Q1. What and why are the problems you faced in designing in this block?

Yes it was the fact that we didn't know how to use the new softwares and were very much used to Photoshop and all. It was hard to get used to the new ones and then actually start working on them.
Q2. Will it take the same time to produce work as in regular softwares like photoshop? Why?

No obviously it won't because we have to get used to the tools and the way they can be used to our benefit. Each software is designed to do things differently and we are so used to photoshop that we were actually confusing the layers or tools of one software with the other.

Q3. Would you ever prefer to switch softwares from the usual ones to completely news ones which you have never touched, to produce the clients work? Why?

Well no not to produce client work but yes ofcourse to learn more softwares and to learn new things. once i am comfortable with the new ones too then i might use the new and old softwares both combined to produce work.

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