USER EXPERIENCE DESIGN AND INTERACTION DESIGN RESEARCH AND ANALYSIS ON THE PICSART AND THE MINISTRY OF EDUCATION & SCIENCE, SPORTS AND CULTURE IN ARMENIA WEBSITES

by

Rozi Aloyan

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**Introduction**

We spend most of our time interacting with different websites and applications for different purposes. Due to worldwide statistics on average people spend three hours of their day in different web and social media (Tankovska, 2021). It is inevitably true that online media influences our way of thinking and perceiving the world. Therefore the role and impact of technology and media is huge in our daily life. The form and representation of information through media is also important, because if the website is not accessible, usable and easy to use, people will leave it without spending any more seconds in it. People value their time so much, and in the world where all is happening fast, no one would like to face hardships and frustration, just to find information or entertainment. As they can find another website that provides it in a user-friendly, effective and readable manner.

As Steve Jobs says, “ Design is not just what it looks like and feels like. Design is how it works”(Babich, 2019). This quote expresses the real aim and purpose of interaction design and user experience. John Kolko gives the description of interaction design in the following way, “Interaction Design is the creation of a dialogue between a person and a product, system, or service. This dialogue is both physical and emotional in nature and is manifested in the interplay between form, function, and technology as experienced over time. There can be found an overlap between the interaction design and user experience, because they both are concerned with creating readable, usable and satisfying interaction between the users and the product”. By looking at the bigger picture of User Experience Design (UX), it focuses on understanding the users, their values, pains, needs, abilities and limitations to shape the best experience according to it. UX includes useful , usable, desirable, findable, accessible, credible and valuable practices that create and improve the interaction between the user and the product or a service (Usability.gov, 2006).

The question is, “ Do the leading companies and governmental institutions in Armenia consider factors that enhance good user experience to the users, through which the institution or services can have satisfied and permanent users? ”. This Capstone project is focused on finding out the interaction design and user experience of Pics Art company and The Ministry of Education, Sciences and Culture of Armenia websites.

 PicsArt was founded by an Armenian entrepreneur Hovhannes Avoyan (PicsArt, 2020). The aim was to give people accessibility to quality tools and collaborative space to share their work. Their services include photo editing games, remix pictures with friends, make stickers, and share different creations with the world.

The website of The Ministry of Education, Sciences and Culture of Armenia (ESCS) is a one-year old website, and is still in the development stage. More than 500,000 people, a majority of whom are Armenians, use this website on an annual basis, and some proportion of people use it on a daily basis. The goal of this website differs from PicsArt. ESCS website is informative, mostly about the latest news, events, festivals and public debates. It combines topics from three different aspects in Armenia, therefore the website is loaded and has so many pages inside.

Considering that these websites are very different with their form and aims, this Capstone is going to dig deeper and analyze and compare some of the design principles and laws that were present or absent in the structure of the websites. The work consists of individual web design analysis, interviews and usability testing.

**Literature review**

*User interface and user experience design principles for interaction design*

Nowadays, vast numbers of products and services are built, and consumers form their first impressions about the product according to the first touch and look at its interface (Zender, 2008). The number of similar products grows, and to become and remain on top of the market, the company needs to consider making effective interface design (Zender, 2008, p. 85).Zender has analyzed specific patterns that are aimed to improve interface design and define the desirable user experience. One of the helpful findings is a site map, which makes the user experience "easy-to-use" and "intuitive". The author makes design and content research through Human-computer interaction literature. The source helped in finding and analyzing the principles that are consistent with a number of "thumb rules" proposing different parameters that guide innovative and inventive design interface/experience (Zender, 2008, p. 89).

Besides using specific patterns that promote the improvement of interaction design, another research analysis done by Preece, Sharp and Rogers (2019) discusses the importance of methods for human-computer interaction and web-design technologies. The book analyzes specific techniques explored by different designers that are necessary to use to evaluate the interface design. Good interaction design's central and main features are based on its usability, functionality, aesthetics, content, sensual and emotional appeals (Preece, Sharp and Rogers, 2019, p.14). Every task of the user is measured, and several models are being used to keep the user satisfied. For instance, constraints, consistency, and familiarity are attributes that allow users to be engaged and perceive the tasks clearly (Preece, Sharp and Rogers, 2019, p. 29). By following the models, laws, and principles of the interaction design, users get impressed and want to spend their time surfing in the webpages, and in the best cases they frequently visit the web and app of the brands (Preece, Sharp and Rogers, 2019, p. 41).

Michal and Diana Malewicz dig deeper into the representation, usage, and importance of User Interfaces in websites (2020). Designing User Interfaces is a very creative and, at the same time, thought-provoking process (Malewicz, 2020, p.26). Aesthetic is subjective, and the authors believe that it is followed by internal harmony. To create balance, the authors suggest keeping the shapes, images, and icons precise, paying attention to details, and carefully planning all necessary design tools to influence the user (Malewicz, 2020, p.29). Usability is the base of User Experience, but the clarity that comes with User Interface is equally essential. For instance, the lack of grid or eye-watering colors decreases the consumers' readability, reducing the website's usability. Moreover, to make the website readable and clear, designers must consider the white space, proper hierarchy, and content(Malewicz, 2020).

User Experience is made of certain disciplines, laws and principles that create clarity, accessibility, readability and functionality to the user (Krug, 2014). Before creating a design of a website, a UX Researcher has to ensure that the design is relevant, how the user will interact with the product and make it as easy, understandable and pleasant as possible. The author emphasizes important features that have to be present on the homepage of each website. A website with good user experience has to be hierarchical and identify the mission of the website immediately (Krug, 2014, p. 112). It is preferable to have a search button on the right side of a page, so the user feels comfortable from the very beginning (Krug, 2014, p. 114). To make the website intuitive, the design has to give the user an idea where to begin, make it obvious how to find things, and provide invisible hints about sections and features in the website (Krug, 2014, p. 120).

One of the most impactful parts of UI design is the choice and psychology behind the colors. Colors have strong ties with our emotions, which have powerful associations with different things in our lives (Rider, 2010). Our perceptions and preferences about the surroundings can be built based on colors, because they carry important meaning and impact on people's cognition, and behavior. Colors like blue and green are believed to be used most in health, banking, finance and fitness fields (Rider, 2020, p. 21). If the designer wants to raise emotions close to youth, energy, creativity and taste, then they are suggested to use the orange color (Rider, 2020, p. 44). Besides conveying emotions the saturation and contrast of colors are also important, as they affect the readability of a website (Rider, 2020).

A very fascinating book, written by Steve Krug (2009), is aimed to prepare the User Experience Designer and Researcher for the usability testing and its processes. The book describes and explains the aim, whole preparation and the actual process of testing. A website has to be tested constantly, and improved step by step. The purpose of usability testing is to improve the website by identifying and fixing usability problems(Krug, 2009). One thing to keep in mind is to be empathetic, encourage the participant, and make sure that they are not the one being tested. The author helps the designer to understand how to start the conversation with the test participants, how to comfort them and make sure that they are comfortable. (Krug, 2009).

*The history of PicsArt & ESCS*

Every country builds a competitive and sustainable economy based on some political and economic challenges. Growth is visible in many economic areas of Armenia, and it comes out that it occurred with the implementation of technology innovation and development in the country. Significant achievements of the country are considered to be high-tech industries and knowledge-based industries (Amirkhanyan, 2017, p. 18). Many IT companies are mainly based and registered in the USA Silicon Valley but continue developing their motherland processes, having a high international recognition level. The most famous among the Armenian IT products are «PicsArt» and «Shadowmatic» (Amirkhanyan, 2017, p. 20). PicsArt was founded in 2011, and its development, a photo editing and sharing mobile application, is considered to be among the five hottest startups of 2015 by Forbes (Amirkhanyan, 2017).

By the law of the Republic of Armenia, on May 8 in 2019 , based on Amendments and Addenda to the Law on “Structure and Activities of the Government" some ministries were merged into each other. The Ministry of Culture, the Ministry of Sport and Youth Affairs and the Ministry of Education and Science were merged into the Ministry of Education, Science, Culture and Sport of the Republic of Armenia. Arayik Harutyunyan was appointed to be the RA Minister of Education, Science, Culture and Sport, on 1 June in 2019. This source and information was very significant during the usability testing process, because to understand the idea and logic behind the structure of the website, we had to know the essence of merging and having three ministry information in one page. It was helpful to know that all the governmental websites have the same navigation and content rules. Therefore, it was important to consider that all the decisions were well thought and publicly discussed before creating a huge and loaded website (ESCS, 2021).

**Research questions**

This research will be analyzing the interaction design and the overall User Experience of PicsArt and the Ministry of Education & Sciences, Culture and Sports websites. To find out which UI strategies and UX principles have Pics Art and ESCS used in their websites, the following primary and secondary research questions will be addressed.

1. How is the usability, readability and effectiveness of PicsArt and ESCS websites?
2. What kind of UI/UX principles, laws and rules are used in the websites of PicsArt and ESCS websites?
3. How do the users react and feel about the functionality, accessibility, usability and the design of PicsArt and ESCS websites?

**Methodology**

The methodology of research and analysis of this project were both qualitative and quantitative. Qualitative research consisted of three parts: individual web design analysis, face to face interviews with UX designer, Product designer or a Project manager specialists of PicsArt and ESCS websites, and usability testing with the potential users of the websites. Usability testing was kind of a quantitative research focused on gathering data and observing the experience of consumers of both websites. At the end of the research and analysis it became clear which strategies the website creation team aimed to use, which are implemented on the website, which rules, laws and principles have been considered and the level of usability of both websites.

To be more specific, for qualitative research, individual interaction design research and analysis was done on the websites of Pics Art and ESCS. It included analyzing the website with all its functionality and visual elements. It was planned to go through all the stages of the design process to determine the quality of the organizations' interaction design, before starting to analyse the last version of design. Some of the stages are user research, defining the problems, generating ideas, prototyping a design, and doing user testing (Allabarton, 2019). It included having a closer look at the website's human interface guidelines, buttons, icons, size, and accessibility. This initiative didn’t take place, because of lack of materials, experience and professionalism in User Experience Design.

However the research and analysis continued with dividing the web design analysis into three significant characteristics: usability, readability and effectiveness. Web design analysis was based on the main human interaction principles of User Experience and User Interface Design. Some of the questions addressed during the analysis have been asked to the potential users during the usability testing stage, to validate the gathered data and analysis during the individual web design analysis. Some of the general features that were considered are the following. Starting with the readability; can the user clearly see what functions are available? As it is a fundamental principle of successful user interface design. It doesn’t really matter how this is achieved. What matters is that the content is well-understood and visitors feel comfortable with the way they interact with the system(Silver, 2018). When a new visitor enters a website, the first thing they do is scan the page and divide the content area into digestible pieces of information(Friedman, 2008). So it is yet to be found whether the websites are intuitive or not. Is the layout scannable: such as are the headlines and links visually distinctive from the rest of the text, is the text appropriately aligned, do the colors express and put the focus on the most important features? Users usually want to have the control of navigating in the website, therefore they don’t want new windows popping up unexpectedly. So they want to be able to get back with a button. Considering this fact, did the websites use this logical feature “Back” button in their website? Let users explore the site and discover your services without forcing them into sharing private data. Ryan Singer, 37Signals team developer states, users would be eager to share an email address if they’d seen the feature work, so they had some idea of what they were going to get in return (2021). Also the usage and choice of typography, color, images and icons was discussed in the readability section.

In the usability section the research and analysis questions were based on Steve Krug’s main laws of usability. For instance, the first one concerning the fact that the web-page should be obvious and self-explanatory. When the site is being created it is very essential to get rid of any possible question marks. More specifically the following questions were investigated: How long does it take to load? How easy is it to find information? Is there a search button for the users? Do all the links work? Does it work on mobile devices?

 The last section of analysis was the effectiveness, during which were taken into consideration several factors. Four major characteristics were the simplicity, clarity, distinctiveness, and emphasis. The Simplicity section included only those elements, which are most significant for interface communication (Friedman, 2008). Secondly, the clarity is very important, by saying that, all components should be designed so their meaning is easily understood. Distinctiveness is another characteristic of effectiveness as it involves all the important properties of the necessary elements that should be distinguishable(Friedman, 2008). The last component is the Emphasis, which helps the user to focus on the most important features on the site and do not get distracted.

 After an individual analysis the next stage was to organize the interviews with PicsArt and ESCS websites. From multiple tries and networking methods, some of the PicsArt specialists got back in contact, however couldn’t find time for being part of this work and helping with some of the data analysis and statistics. Compared with them, ESCS website specialists contacted back and immediately agreed with having an interview. The interview was planned beforehand. The interview started with introducing and getting acquainted with each other. The first thing that was very interesting to find out was the work and design process of the website creation. Did they use any design thinking strategies? Did they do usability testing before? If they did, then how many times? What do they do to improve the quality of the website? According to the analytics, in which frequency do people use the website? Do they develop any strategies to attract and engage people to the ESCS website? The interviewee didn’t provide concrete and precise answers to all of the questions, because she was not the professional responsible for designing and updating the website. However, she was very welcoming and friendly to help with the research of the project. This Capstone work with its aim and processes was described in detail to them. The representative of the Ministry of Education Science, Sports and Culture was very excited about this Capstone project. A significant thing to note is that, there is no separate section answering all of the mentioned questions. Nevertheless, most of the questions will be addressed and answered in the analysis and testing sections.

 The last stage of this Capstone project was usability testing. The testing was done based on the strategies of Steve Krug’s “ Rocket surgery made easy”. The testing started with choosing the target participants for PicsArt and ESCS websites. The most appropriate and probable users seemed to be youngstures for the PicsArt website, whereas teachers, sports people and artists for the ESCS websites. Based on these assumptions, five people with different professions and age range. According to Jake Knapp (2016), five is the best number for understanding the variety of users, their approach, and opinion on the brands. Some researchers believe that the research is more valid if we interview many people.The testing helped to collect data-based information about the consumers' perception and experience with the website. It was also very interesting to validate some of the findings during the individual analysis.

**Web design analysis**

This section is going to demonstrate individual research and analysis dedicated to the Pics Art and Ministry of Education, Culture and Sciences(ESCS) website’s human interaction design. The analysis is based on the main human interaction principles of User Experience and User Interface Design. More specifically to the three most important features; usability, readability and effectiveness of the website design. There are some critical assumptions, which are in accordance with the design expert principles. The analysis will also include helpful suggestions to both of the institutions.

The analysis was planned in the following way. First, I made a criteria for the analysis, which can be found in the following table (Table 1). The criteria includes questions, laws and principles that the designers and developers take into account during the website creation. We will find out if the designers of these two websites consider the significance of readability, usability and effectiveness in shaping a good and satisfying user experience.

|  |  |  |
| --- | --- | --- |
| **Readability** | **Usability** | **Effectiveness** |
| Content | Navigation | Traffic |
| Buttons | Site architecture | Bounce rate |
| Text Alignment | Mental Models | Load |
| White space | Clarity | Broken Links |
| Visual hierarchy | Focus | Website speed |
| Text colors | Familiarity | Time Spent on the website |

*Table 1*

***Readability***

In this section we are going to find out about the specific characteristics of typeface, font, font color, font size, spacing, white space, content and visual hierarchy of PicsArt and ESCS websites. Did they measure significant visual impacts on the user? Did the UX designer consider all the features that make the website readable? And most importantly, are these websites readable enough for the users, that from the very first glance comforts the users and makes them stay and surf on the website?

Before going into analysis, let’s understand the importance of website readability. Readability of a website is aimed to measure ways and strategies according to which users can easily read and understand the text and content of the website. Why is it important to take into account the choice of font, spacing, colors and visual hierarchy that make a website readable? Highly readable content grabs the visitors’ attention and proves to them that the website has a solution to their problems, and intuitively good readability connects the user with the website faster and easier (CRO Guide, 2021).

Each style of a typeface creates a specific mood and changes the look of the content by conveying a different emotion(Plural sight, 2015). PicsArt uses Sans Serif typeface, while ESCS uses serif. What is the difference between these two and which can be considered more readable, relevant and effective? Serif typefaces are considered to be older than the sans serif typefaces, it is recognizable through its additional lines and strokes on the letters (Dogusoy, 2016). They are classic, elegant and more formal. It is believed that serif fonts are used to convey trustworthiness to the user. The choice of fonts coincides with the goals of ESCS website, because their goal is to inform people about important and essential decisions and news. Therefore, to make people trust the source they use a font, which creates the feeling of credibility among the users. In comparison, sans serif fonts are modern, and as the word “sans” means without, this typeface means without any strokes and lines. These typefaces are used to show friendliness, minimalism and approachable vibe (Rinaldi, 2019). Start-up and Tech companies that want to look young and casual prefer using this typeface. Pics Art is a very contemporary website and wants to show its newness and friendliness, which they were inclined to build. We cannot make conclusions which of the websites is more readable, because each of the typefaces coincides with the goal, mood and vibe of the website.

 The font family of PicsArt is Open Sans,more specifically these two fonts are used “Arial” and “Helvetica Neue”. Open Sans is a modern sans-serif typeface designed by Steve Matteson and produced by Google. It is especially designed for web, and mobile interfaces. It’s very readable in small sizes too. It is simple and it really makes the content easily readable.

Segoe UI is the font family of ESCS, tahoma and arial unicode are also used. Segoe UI

Typeface is not suggested to use, if the company has a brand and wants to have a unique name and approaches, because Segoe UI is the branding font used by Microsoft to produce print and advertising materials (Pietrzak, 2011). It is focused on the idea of consistency in how users see all text across all languages. ESCS website has the choice of three languages, and probably that is the case, of why they have chosen to use this font. This is very thoughtful from the UX perspective that the web designers considered to keep all the text consistent even when the user changes the language of the website. Arial Unicode and Tahoma work together very well (Microsoft Build, 2021), as they share similar patterns in the letter, which helps the user to not notice the difference visually, but to be able to differentiate their purposes and actions on the webpages.

While hovering through the navigation of PicsArt we can notice the heading of subpages are dropping down, by just hovering the mouse around. This feature is very convenient, as it doesn’t make people press the titles to find out what’s in it, instead they hover around and without any effort, they can see what options and opportunities they can find on the website. Whereas, in ESCS, users need to click on the navigation headlines, to open the drop down menu, and then see what’s inside. Babich, a UX designer says, “Users usually tend to explore web-sites according to the “F”-pattern form of writing the message, because they notice it first”. This is a type of pattern due to which people scan the content on the page, users read first in a horizontal movement and that is how the pattern like the letter F is formed (Babich, 2017). Pics Art used this pattern in the most important message on the landing page, where the user can scan the message faster and jump to the CTA button.

 All the titles in the PicsArt website are short and concise: however when it comes to the description of the features or the editing tool, the website provides very long ones. They use seven to ten lines to describe the purpose of a feature, filter or a tool. So a user might want to know more information about the feature or the editing tool: however after reading one and two lines, they will probably get tired. Everything is fast, especially in the digital form, so the vast majority of people would not like spending their time on reading to understand the aim, benefits and methods of the tool. It would have been preferable to put a short descriptive video that would explain step by step how to use the tool and edit videos through it. Instead of text, videos and animations are more interactive and engaging. Therefore, the users will like it more and with pleasure watch that short video as the current description is too long. Moreover, as users do not read and prefer scanning, it is suggested to use distinctive color or some other visual elements to put the stress on the most important words in the text.

Talking about the advantages of the readable features, I would like to note about the white space. Not only does it help to reduce the cognitive load for the visitors, but it makes it possible to perceive the information presented on the screen easily( Coa, Zieba, Ellis, 2015). The layout of pages are built based on grids, which makes it all look compact, consistent and cohesive. Therefore, the webpages are considered to be readable and satisfying for the PicsArt users. Color of the font on the biggest headlines is pure black, whereas the other two headlines and texts are in different shades of grey. Black text with white background is the classic combination of colors, they make a website unobtrusive and help the user to feel user-friendly. Purple is the branding color of PicsArt. Color choice of branding and website is very important, as it provokes different emotions to the viewer. Each color has a special impact and characteristics on people (Miller, 2012). Purple is considered to express wealth, richness, wisdom and spirituality. Since it is not a color that comes from nature, it is considered to be an artificial color, and to some people it expresses fakeness and negative emotions. Moreover, it makes people feel exotic, new, energetic and brave (Cherry, 2021).

Compared with the ESCS website, we can see a lot of differences between the level of readability because of a different choice of typeface, fonts, colors, images and overall the visual hierarchy. The website uses the combination of dirty yellow and black colors. But this is not used consistently, we can notice that “white” color is used for the text on the landing page, which is not readable, as it is written on a colorful image. The psychology behind the colors is important, but it seems like the choice of black and yellow is suited with the colors of the national insignia. Black creates a sense of consistency and builds a specific mood for the user. It is also the most preferred color for assuring good readability with its visual emphasis (Ferriera, 2019). Yellow color is associated with happiness and optimism, however as it is vibrating: creates a sense of frustration in people. In the ESCS website, cream yellow tone is used, which encourages new ideas, but indicates a lack of confidence and a need for reassurance. If the ESCS website wants to seem more confident in the eyes of the user, they have to change the tone of the yellow and make it brighter, for the positive impact on the users(Kelly, 2019).

By the very first glance on the ESCS website, we notice that some of the gestalt principles are used on the landing page. Gestalt principles are the laws according to which humans perceive objects through similar patterns, recognized elements and complex images(Interaction Design, 2021). Our brains structure the form of an object and perceive it through these principles. The law of proximity is used in this website, as we group the banners that are close to the news headline, and intuitively understand that those are concerned to the news, and if we click we will go to a new page and read the article. Through the use of this law, the viewer is able to distinguish the headlines and descriptions, and group similar objects together. Another law that is used is the continuity law, where our eyes continue reading descriptions and links below the headlines through a continuing form of structure (Todorovich, 2008). This website uses a very clear hierarchical structure, which means that the users will perceive the content easier. The first thing that the user tries to do is to scan the page and divide the content area into digestible pieces of information. The information is divided into pieces through the gestalt principles, however the whole page is center aligned. Why is this considered a less effective approach? Because it is preferable to use left aligned text as it makes it easier to follow and continue reading the text and paragraphs faster, as our eyes don’t have to work hard to follow where the new line starts every time. Whereas, in case of center aligned text the viewer loses the lines and each time they have to find the place of a new line (Anthony, 2010). The law of similarity from gestalt principles states we perceive that objects in a similar form, size, color and font are related to each other. Thus, we can conclude that all the headlines in this website are clickable. It is actually true, however the headlines of “job vacancies'' and “public debates” have a disadvantage. With their position on the page they differ from the rest of the headlines, as they are aligned to the left and have no description at all. There is just the headline, and if the user wants to find out more on this topic, they have to click to find it out. Whereas, if they want to assure that the users get a good user experience, they have to make the steps of reaching information the shortest path. The problem is with the consistency of the alignment on the page. Interestingly, when the user clicks, on one page opens a blank page. This is a bad user experience, because users feel confused. Do they have an internet connection problem? Is it still loading? What is wrong? Well, nothing is wrong, the creators didn’t consider that the users need to be informed there are just no job vacancies.

 The footer also has both advantages and disadvantages. Starting from the negative side, the user sees three titles in the same regular typography and size as the rest of the texts on the page. Actually, the regular texts are clickable, however they do not look like clickable titles. How could the user understand that those were clickable? By just adding shadows, an underline or distinctive with its color, the user could easily and intuitively understand that they are clickable.

***Usability***

Starting with the PicsArt, the first thing that the visitor sees is the animation on the right side. Animation is the most attractive feature on the page, which engages the viewer more than any image or video could, it is like a live and short tutorial. After that we notice the biggest headline on the right side of the landing page. It says “Create Amazing Photo & Video Edits With Online Design Tools”, this message is short and direct. Next our eyes travel into the expressive button in blue saying “Start Editing”. Looking at the navigation of PicsArt, the viewer gets the sense of calmness and comfort, with the help of the classic color combination of the headlines and the background, the font choice and the distance between the headlines. There is a satisfying distance between titles. It is very important to choose the right typeface for the website, as it shapes the perception of the user about the meaning of messages, headlines and buttons.

The PicsArt website works very intuitively; as a visitor, I can find the necessary tools or information that I need, without thinking how to find it, because I can automatically find it. In other words, we can say that the website was built based on the UX mental model. The model is the beliefs and experience of the user; it is a collection of past interactions, websites, mobiles and other products that have an interaction (Vinney, 2019). Another question to address is; how easy was it to find information? Both PicsArt and ESCS have a search button in the navigation. This is very comfortable and useful for the user, as sometimes we want to find something; to save time, for this action we love to directly do the search, so instead of surfing in the navigation area to find something, a user can do a quick search in the search area.

Second principle of usability is clarity, which makes the user’s experience satisfying and user-friendly, by keeping it simple, familiar, consistent, guiding and with good information architecture. All the mentioned characteristics coincide with the goals of PicsArt, however for an ESCS website, users can lose the flow of information, it will be hard for them to come back to the previous page, to find complex information. In some cases, such as cultural festivals, they need to take more than four steps to find the information about it. About the familiarity part, it is very subjective, for some part of the audience the PicsArt website structure and design can be familiar, for others the ESCS, it depends on the cultural perspectives. Why does it differ? Each country has its own interface principles and design standards that differ from each other, which is very natural. As the PicsArt website is not only for the Armenian audience, but also for the American and European visitors, they considered all the accessibility and usability techniques to comfort and satisfy all types of nationalities.

Moreover, the principle of focus is used in the PicsArt website, as there are subtle hints providing users of how to find more about the editing tool. Frieder says, “Focusing users’ attention to specific areas of the site with a moderate use of visual elements helps the visitors to get from one point to the other without thinking of how it actually is supposed to be done”. Last but not least, it is yet to be found whether these two websites have done usability testing before launching the website. Added to this, do they continue making constant tests to make sure that they update and improve the usability and effectiveness of the website? We will find out about this in the interview section with the professionals of Picsart and ESCS websites.

***Effectiveness***

In this section, we are going to discuss the effectiveness of the website based on its traffic, bounce rate, average time spent on site, keyword rankings, website speed and if present the broken links.

It is notable that the call to action(CTA) button works greatly, as it catches the attention of the user immediately with its size, left sidedness and distinctive color. A CTA is aimed to help the user to understand which type of action they can do on the website to make a purchase or a product (Invision, 2021). Compared with ESCS, they do not use certain CTA’s because their website goals differ from PicsArt. PicsArt uses buttons in an attractive shape and color, to lead the users to find or use a tool, to sign up or to subscribe. Their business goal is to engage and impress people with their special image and video editing tools.

The first principle of usability and effectiveness is to assure the accessibility and availability of the website, which includes the load, the speed and the overall work of the website(UX planet, 2019). They do not make visitors wait and get frustrated. According to Google page speed insights, a tool that measures the load of websites, it took a second, in some pages no more than three seconds to load the PicsArt website. This helps the users of PicsArt be engaged and stay on the webpages as it delivers fast information to them without any loads. Also all the links work on the website. However in the case of ESCS it can take longer to load, even though all of the links work, nevertheless there are links that open to vacant pages. As mentioned before, the links of “ job vacancies” and “public debates”, when opened, the users see a blank white page. This confuses the user, they want to understand what is wrong? Is there a connection? Or aren’t there any news on these features? The fewer question marks visitors have, the better sense of orientation they have and the more trust they can develop towards the company the site represents. In other words: the less thinking needs to happen behind the scenes, the better is the user experience which is the aim of usability in the first place. Therefore, any features that might make the user think, get frustrated and spend some more time is considered to be a bad user experience.

The content and the structure of the website changes depending on the choice of language in ESCS websites, so people get different experiences by changing the language of the website. There are many web pages that are absent in English and Russian versions. Is it an effective way to regulate the website? It is unknown, however from the interview with the specialist of the Ministry of Education, it was found that they consider which of the webpages are necessary for the foreigners. Therefore, even if some pages are lacking in English and Russian versions, it doesn’t mean that the website is not useful and effective with its way of communication.

**Usability testing stages**

We don’t see things in the same way as other people do. The individual analysis was based on UX laws and principles, however to get honest feedback from the real users, that is a usability test was a very significant part of validation. I have chosen to read *“Rocket Surgery made easy”* book, by Steve Krug, which explains the whole process of his method of usability testing. It is believed to be one of the effective and efficient ways to figure out and improve the quality of the website. First, let’s define and understand what is usability testing and what is its purpose. Usability testing determines whether the website or application is useful, findable, accessible, usable, functional, readable and desirable for the real or potential user. Usability testing focuses on the user's flexibility of using the application or web, the ability to handle controls and whether application or web to meet their objectives.(Guru, 2021)It also helps to find out whether the word, color, structure, images are aesthetically pleasing or not.

First, the stages for the process of usability testing that have been used will be introduced, developed by Steve Krug. The test starts with getting acquainted with the participant in a very friendly way, getting to know the person’s routine, interests, goals and expectations. The participants need to be sure that it is not them being tested, but the website. So, the interviewer has to be very careful while presenting the aim of doing the usability test. The questions used during the first stage will be outlined:

1. What do you do?
2. What is your occupation?
3. What do you like to do in your free time?
4. What are your favorite websites?
5. Do you use tools to edit images or videos?
6. Which types of websites do you usually use? Can you mention your favorite one?
7. How often do you browse online?

The second stage was not part of Steve Krug’s strategies, but it is part of a research and test to find out the first impression on the visual elements, text replacement and color expression. It is called a “ Blink test” or in other words, UX researchers call it a “ Five second” test. During this test, the user sees the website for five seconds, and then shares his thoughts and opinion about the impression on the website. Why do the users need only five seconds? Sarah Carly, a UX researcher says, “ Five seconds is just long enough for a good design to communicate its primary message. Additionally, users are increasingly multitasking, whether it’s switching between Apps with a single swipe of the finger, or opening multiple browser tabs at once. Reduced attention means an increased importance in effective design and messaging.” There are three ways to do the Blink test. I chose the Q&A method, during which I asked the participants questions based on their thinking and impression. The questions were the following:

1. What does this site convey?
2. What is its purpose?
3. Does it look familiar?
4. What kind of feelings did it give you?

The aim is not to measure their memory, but to figure out what did they catch first, what were their feelings and initial response to the website design. Papers were provided to some of the participants, who didn’t feel confident to share their opinion verbally.

The third stage was about digging deeper into their opinion and thoughts based on a long enough journey on the website. This stage is aimed to determine if everything is clear for the user in the website.The participants were given the ability to use the website, swipe, click, go from one page to another and see what can be found in the website. After their actions, I asked them several questions, such as:

1. What do you think you can do here?
2. Is there anything confusing to you?
3. Are there any confusing quotes or expressions to you?
4. How do you feel about the colors?
5. How do you feel about the overall structure of the website?
6. Do you think you can find whatever you want to search easily?

Finally, for the last stage I had created five scenarios for each of the website users, and asked them to imagine that they are in a specific situation, they have a specific question and to complete it, what would be their actions? How would they find whatever I am asking for?

**Target Group**

The target group for ESCS website would be 14-63 year old people, because it addresses a comprehensive content that interests people from almost all ages. It shares all the important information about the culture, sport, science and education in Armenia. So not only the sportsmen, sport specialists, teachers, students and artists are the target audience, but also people interested in these subjects. For PicsArt, the target audience is assumed to be mostly the young people. The website is new with its tools and is instantly being updated with the news tools and information. Mostly young people love editing images, making stickers and gifs, but also people who need these tools in their professional life. During the interview with PicsArt professional, it was found out that the platform was made for those people who love editing and adding different filters to their photos on social media. Therefore, it is believed that most of the users are youngsters who are fond of editing images, videos, creating stickers and using gifs. Many famous celebrities have been using PicsArt to edit their photos and videos. For both of the websites I have chosen five people who would participate in testing these websites, their ages were; 21, 24, 28, 31, 42. These people are from the marketing, design and IT sphere.

**PicsArt Usability testing**

The first participant was 35 year old Anahit, who is an economist with her profession. She usually uses Facebook social media, Ahrevs and Moz informative websites. She edits her videos and images through Microsoft movie maker for Windows. During the blink test for the PicsArt website, in just 5 seconds she could figure out the purpose of the website, with the help of the CTA button saying “ Start editing”. During the second stage, while viewing the landing page, she skipped the text on the left side of the page. She scanned the text, and paid attention only to the first three words ``create amazing photos”. According to her it is enough for the user to understand the purpose of the website. Also, she added that the animation on the right side of the landing page catches the attention of her, and she thought it had nothing to do with the website, that it was just an advertisement.

She was given a scenario based on which she had to achieve the task, “ Imagine you are a designer and you want to learn and find out how to create gifs or how to follow the latest trends. Do you think you can accomplish your goals on this website? If yes, how would you do that”. She answered that she definitely thinks it is possible to achieve the mentioned goals here. So, she used the following steps to do it:

1. She clicked “ Create” from the navigation
2. Saw the page full of frames for social media posts, however couldn’t find any key to the gif making tool
3. Went back to the landing page
4. Started hovering around the navigation, and in the “Discover” section found “Gifs”
5. Visited the page
6. Saw a lot of gifs, and pressed on one of them
7. And the website instantly asked to register and then continue using the website tools. She told me that she wouldn’t continue using the website, as it doesn’t even allow her to get acquainted with the editing tool and see whether she likes it or not, and if satisfied, then she would create an account and use the website.

Added to this, she couldn’t find the gifs from the very first search, which also is not a satisfying experience. During the UX research stage, it is very important to consider the possible feelings and frustrations that a website can cause to the user. Many UX designers offer to let the user try the features at least once, then offer the registration to continue using. This way the user will build trust, get to know the features and after all decide to Sign up and use it whenever they want (Emu, 2017).

The same reaction happened with another participant, a mobile IOS developer, aged 28, Sargis who was asked to try finding a tool that adds filters and edits images. He was also asked, “Would he want to know whether the tools are free to use? ”. He answered that, after finding the tool he will figure out whether it is free to use, or it costs something;

1. He started to look for a search in the filter section. However, there was none. From the navigation bar, he found “ Products”
2. Chose photo editing
3. Went to a new page, and when decided to try the filter that adds an exposure, it offered to register. He didn’t want to continue using the website, because he didn’t get the opportunity to have a free trial before registering.

The other participant, Angela is an SMM specialist, 42 years old, who frequently uses Instagram, Facebook, LinkedIn. She follows Forbes and Social Insider. From the very first blink, she expressed her emotions. She told me that she felt panic, because of the animation on the right side of the landing page. Her all attention was on the animation and she didn’t pay attention to any information on the page. She didn’t feel comfortable searching and finding whatever she needed in English. She started looking for the language choice change button, however could not find it anywhere. So, she didn’t even try the proposed scenario.

Our fourth participant was Lusine, a graphic designer, aged 27. She prefers watching films and TV series over the following news, or spending time on social media. She uses Netflix and Putlocker film websites. She loves listening to different types of podcasts and follows designers on Youtube and Twitter. Lusine was obsessed with the minimalist style of the website. She said that the colors and overall mood of the website were very professional and promising. Her task was to find how to create or edit videos:

1. She pressed the “Create” button from the navigation bar
2. As mentioned above, the website suggested to register
3. She didn’t get mad or confused, but signed up fast and easy
4. Chose the free tool to edit the video. As we can see the reaction of people is different, which is very natural, if the feature is very important and necessary, the user can be patient and overcome difficulties in the website. However, in the case of Lusine, she got a good first impression about the website, which gave her confidence to not think for a second, and easily register to continue using the website.

The last participant was Tamara, a 24 year old communication specialist. She uses Amazon, Coursera, Pinterest, Forbes and LinkedIn. For editing images and videos, she uses Canva, Renderforest and Piktochart. She uses different filters to post her photos and videos on social media, moreover she writes blogs. She looked at the website, investigated the tools, and said that she prefers using the features of Renderforest. She said that the descriptions to understand the tools were long, which was very interesting. As during the individual analysis it was discovered too. According to the given scenario, she should imagine that she liked the website and wants to be informed about the latest trends, news and updates. How would she try to subscribe to the website? Will she try to do it? She agreed, and responded that the website probably has a place where she can write her email and subscribe to PicsArt updates. However, from a long time of searching, she couldn’t find it. She couldn’t find it because there was none. But it would have been an effective feature, for those people who like using the website and want to stay updated.

**ESCS Usability testing**

The participants of the usability testing for the Ministry of Education & Science,Sports and Culture and PicsArt were the same. As the characteristics and website preferences were presented above, this section will include the name of the participants, their impressions and the steps of completing the scenarios.

Anahit, the 35-year old economist was very surprised to see the website, because the first thing that the user sees is the three rectangles saying “Education & Science”, “Sports”, “Culture”. She immediately asked me, “If I click on them, will it open to a new page of the named category? ”. She was given the chance to try it by herself, and it actually opened a new page, which was a separate web page of a certain category. It is essential to note that, even though the rectangles do not have shadows that would help the user to understand about their clickability, Anahit intuitively understood. Which means that the structure and the idea works and people actually understand that they can click on it and it will open to a new page. Her task was to find any news on the decision of having offline classes due to COVID 19. However, she told me that she doesn’t visit the website to read the news about education. School informs them about the latest changes and news, therefore there is no need to search for the news on the ESCS website. Here, we did not get enough feedback from the participant, but figured out that parents do not usually follow the website practically, and the user experience level has nothing to do with it.

Our second participant, Sargis, the IOS developer, opened the page and immediately changed the language into Armenian. In fact, in the website many pages are blank in English and Russian, whereas in Armenian all is well-thought and constructed. He said that even if the national insignia

was not visible, if seeing the page in English, from the style and image choice he would definitely feel the Armenian spirit. So, the foreigners interested in the Armenian cultural or sport news, events and festivals can visit the page and get the Armenian culture vibes. His scenario was, he has some complaints and wants to write a direct message to the minister or the ministry. Does he think he can do that? If so, then how would he do that? He responded positively, and started acting:

1. He found “Contact us” in the navigation bar
2. He chose again the “contact us”
3. Read the long text, where the word “column” is highlighted, he pressed it. It was the exact and the shortest way to achieve the task. This means that the user journey map is successfully constructed as the user can find whatever he is looking for in a couple of steps.

Angela is a mom of two children, so it was very interesting to see her reaction to the webpage, to get to know if she visited the site before, and her overall impression on it. From the blink test, she mentioned the fact that she noticed the search button, on the upper part of the landing page. She also shared that it made her confident and comfortable from the inside, as there was nothing she could not find if that button existed. She also noticed the opportunity to subscribe to the Ministry website at the bottom of the page. Her scenario was to find out extracurricular activities or courses available for children. Does she think she can find it? How would she do it? She confirmed that logically she can find it here and started doing the searches. It was very easy to find it, as by looking at the navigation she found the “programs” section, clicked, dropped down two options “ Diaspora programs” and “Cultural educational programs”. She chose the second option and found out new activities, programs and courses available for children. We can notice that the UX designer had a really good common sense and created the navigation bar so intuitively, that people from different ages are able to find what they are looking for in a quick and easy manner.

Our fourth participant, Lusine, the 27-year-old designer, preferred ESCS website visual design over PicsArt’s website. In her words all is clear in this website and she has no doubt that she can find anything necessary. She was excited to see the most important features that Ministry services provide on the landing page. Lusine noticed that the colors on the page suit with the colors of the gerb, titles and images. “ If you are interested in arts and films, and want to know and find out more about the latest festivals. Do you think you can find it here? If so, then how?”. Given the scenario, it coincides with the reality and she became actually interested in finding it out. Her steps were the following:

1. She chose the “culture” rectangle from the landing page
2. It opened a new page, with a new navigation
3. She chose “Arts” section
4. From the dropdown menu she chose film arts
5. Opened up a page where there is a whole text about the Film Production Program. So she tried to open the two other titles in the navigation, “ cultural heritage” was all about the museums and monuments, so she tried “ virtual culture”, which didn’t work. It really confused her, what was the problem with it? Actually, the link was just not working. This is part of not satisfying and accessible user experience, that makes the user think, care and get confused because of not working links. Well, she continued her search. She thought the easiest way would be through the “ search” button from the landing page. Thus, she searched festivals and it opened a page full of outdated information about the previous festivals. It would have been better, if the website told or explained whether there is expected or not a future festival.

Lastly, Tamara, the 24-year-old communication specialist liked the structure of the website a lot. According to her impression, the site comforts her and her eyes follow the headlines and images smoothly. She liked the visual elements next to the titles, and they helped her understand that the titles are clickable, not just simply titles. Her task was to imagine that she is so much interested in finding a job in one of the ministries. Does she think it can be found on this website? If yes, then how? Her steps were the following:

1. She looked for the “information” in the navigation
2. After opening that section she pressed “interviews”
3. And it took her to a blank page. Therefore, she decided to try finding job vacancies in Armenian language. When she pressed the Armenian version of “information”, it opened a huge list of features, and one of them was job vacancies. From this testing, we found out that there is a difference between the structure and content of the website based on the language choices. This can be considered as not an inclusive User Experience design, because the website creators didn’t consider the diasporan visitors, or anyone outside of the country who doesn’t understand Armenian. For instance, the tourists, international sportsmen and foreign language speakers' parents do not understand Armenian, but would like to get information about Cultural and Sport events and festivals .

**Suggestions**

ESCS

It will be much more comfortable and intuitive, if the titles on the rectangles of the landing page were not in white on an image. First, it is uncomfortable to our eyes to read a title that has a very mixed background. It is suggested to add a 16px rectangle on that upper part of the rectangle, which will cover the confusing background with its monochrome shade, and will make the title more visible. Another alternative solution can be to put the title outside of the rectangle.

When clicking on the headlines of “job vacancies'' and “public debates'', it transfers to a blank page in an English version of the website. As mentioned in the analysis this makes the users feel confused and frustrated, because of not knowing what is the problem. To assure a good experience, it is suggested that when the users come to this new page to find out what’s new, they can be informed with a message saying, “ Thank you for your interest, but at the time we do not have new job vacancies.”

The website is loaded with lots of information and subpages, and when the user wants to go only one page back, it is just impossible to do. Because of that, they have to start the search from the very beginning. Also, it will be beneficial to change the tone of the yellow color to change the possible emotional associations of users with the website.

User Experience Design is an essential part of human interaction with different types of technology. Therefore, it is crucial to consider specific UX laws and principles that make the website clear, accessible, usable, readable, functional, and practical. If organizations want to have good and satisfying communication with their consumers, then they need to think and build pleasant experiences for their visitors.

PicsArt

It is suggested to keep the descriptions of the tools short and concise; in other words, instead of providing the long text of the description, they can be explained through bullet points or through short animated videos. By using one of these strategies, the visitor will feel engaged and interested; also, by getting easy and simple descriptions, they will want to know and find out how the specific tool works.

It is also suggested to allow the user to try at least one of the features and tools before asking them to register. Most people avoid using the website just because they have to register to test the feature. People are lazy and do not want to spend time registering; it demands additional effort. Therefore, it will be much better to give a trial before the registration offer not to lose and engage the users.

A presence of the search button is also necessary; as mentioned before, it comforts the users and makes them feel confident in using the website. It is preferable to put the search button feature on the left upper corner of the landing page. Last but not least, during the usability test, we found out that there is no opportunity for subscribing to PicsArt, except for the links to the social media websites. We found out that the users would like to get emails about the updates and news of the upcoming tools and features. Therefore, it is suggested to add that feature on the website, possibly in the footer.

**Conclusion**

User Experience Design is a very important part of human interaction with different types of technology. Therefore, it is essential to consider factors such as specific UX laws and principles that make the website clear, accessible, usable, readable, functionable and effective. If organizations want to have good and satisfying communication with their consumers, then they need to think and build pleasant experiences for their visitors.

This project also includes some limitations. The aim of the project was to research and analyse the whole website design, however the research was mainly focused on the design and functionality of the landing page. Added to this, the criteria of the individual web design analysis consisted of three features: usability, readability and effectiveness. However the interaction design and the overall user experience have so many strategies, laws and principles that the investigated three features are only some part of it. Some of the techniques and important strategies that could’ve been taken into consideration during the analysis are the desirable, findable, valuable, credible, visually appealing, clear and responsive characteristics of a website(Singh, 2013). Added to this, the number of participants was also one of the limitations, because as many people are tested that much the information seems well-grounded and credible. Lastly, there have been conducted interviews with both of the specialists from PicsArt and ESCS, however none of them were design professionals who could respond to more technical questions. The specialists from ESCS and PicsArt were very friendly and open to answer any questions. However, none of them could provide in detail information about their research, design thinking and usability testing of their websites.

This Capstone project was aimed to investigate and find out the User Experience and the Usability of PicsArt and ESCS websites. It was very fascinating to get a deep understanding of the user experience for these websites through having real-life usability testing. Besides getting the answers of the prepared questions, it was very interesting to observe each reaction and step of the users. All in all, both websites were researched and analysed thoroughly based on scholarly research, articles and works that supported during the individual analysis, preparation for the interview and for the usability testing. We found out that each of the websites are good and satisfying for a specific cultural user: however there were some experiences that were not satisfying and good for the users. In our digitalized world where all is happening fast, most of the websites are competing to be the leading one in the industry, and this work shows how each detail enhances the improvement of the website usability.

Fur further research, it will be very useful, to do an overall website User Experience and interaction design research, in a more detailed and practical way. Also, to do usability testing with a much broader number of the participants, to figure out any more misunderstandings. Moreover, this research was concentrated on User Experience, rather than the User Interface, therefore it is encouraged to do a UI analysis with all of its characteristics.Lastly, there was not enough research done about the differences between the website that is available in different languages. Do they differ? In which ways is it different? Does it impact the Usability of the website?

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