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CHILD CENTEREDNESS ON THE PUBLIC SECTOR WEBSITES

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ABSTRACT

The spread of mobile technologies has changed the understanding that condemns the internet to computers and place. Internet access and staying connected are no longer a luxury consumption, but one of the basic needs of social life. In the era that the use of the internet very widened, websites which are one of the important corporate communication tools of brands, take a critical role. Public institutions present their services and works to the public through their websites. Children are an important target group for the services provided by the state. Public institutions are obliged to express themselves not only to adults but also to children. For this purpose, some public institutions include special contents for children on their websites. Websites published by the public sector for children directly serve this purpose. Internet usage patterns and behaviors of children are different than adults. In this regard, children websites developed by public institutions must include certain usability and child-centered features. Children websites of public institutions are evaluated according to usability and child-centeredness criteria within the scope of this work. The main legislative, executive and judicial institutions of the Republic of Turkey and 100 official websites belonging to these institutions are involved in this research by determining sitemaps, and 9 children websites were analyzed by the content analysis method. The results of the study revealed in detail the status of the child-centered websites of public institutions in terms of evaluation criteria.

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STRUCTURED ABSTRACT

To purpose of the study is the determination of the public sector websites focus on children as a target audience, and evaluation of these websites according to general usability and child-centeredness criteria. In this study, as a qualitative research technique, the content analysis method was used for investigation of data included on the child-centered public sector websites. In determining the methodology of evaluation criteria, "Guidelines for Governmental Web Sites v2" developed by TÜBİTAK and "User Experience Design for Children" developed by Nielsen Norman Group were taken into account. For analyses, 10 main usability and 10 child centeredness, a total of 20 criteria were determined. Content analysis was carried out between 20 July and 1 August 2019.

It was determined that 9 of the 100 public sector websites have an active section for children. Websites having connection problems were not included in the study. Information And Communication Technologies Authority, Religious Affairs Administration, Ombudsman Institution, Ministry of National Education, Radio and Television Supreme Council, Turkish Radio and Television Corporation, Turkish Statistical Institute, Directorate General of the Foundations and Directorate General of Migration Management institutions have special contents for children on their websites.

Websites developed by public institutions for children should have usability features. Websites having an independent domain name or subdomain name are remembered easily. Fast loading pages without letting users wait are more preferred. The first impression created during the first visit to the website should be positive. Considering the fact that mobile devices are being used frequently, websites should have responsive designs allowing easily navigating when accessed from different devices. Menu and navigation of the website should provide comfortable navigation. Search function, allowing users to easily find contents they are looking for, should be included on the website. Websites should remove the incorrect links that bothering users. Public sector websites for children should not include commercial advertising. Websites should have special contents for disabled users. Contact information of the institutions should be included on the children websites.

Public sector websites for children should also have child centeredness functions. The user interface design of the website should be child-friendly. The font size used on the website should be enough big so that children could easily read. It is suggested that vivid colors should be used on such websites. Contents of the websites should be grouped for different age groups. Voice, music and video contents that attract children's interest should be included and animated characters should be used. Educational content, which provides teaching children combined with entertainment, should be used. Informational content for parents about the aims and scope of the website should be included on the children websites.

As a result of the research findings, it is suggested that;

- An independent domain name or subdomain name should be used for children websites of TÜİK and VGM,

- The loading speed of children websites of TRT, VGM and RTÜK should be increased,
- Design of VGM 's children website should be renovated for a good first impression,
- Responsive designs should be applied on the children websites of DİB, KDK, RTÜK, TÜİK and VGM,
- Menu and navigation system of VGM 's children website should be improved,
- The search function should be included on the children websites of BTK, KDK, MEB, RTÜK, TÜİK and GİGM,
- Incorrect links should be fixed on the children websites of MEB, RTÜK, TÜİK and VGM,
- Contents for disables users should be included on the children websites of BTK, MEB, RTÜK, TRT, TÜİK, VGM and GİGM,
- Contact information should be included on the children websites of BTK, RTÜK and TÜİK,
- Design of VGM 's children website should be redesigned as child-centered,
- Proper font size should be set on the children websites of DİB and VGM,
- More vivid colors should be used on the children website of VGM,
- Contents should be grouped according to different age groups on the children websites of BTK, DİB, MEB, RTÜK, TRT, TÜİK, VGM and GİGM,
- Voice and music elements should be included on the children websites of MEB and VGM,
- character animations should be used on the children websites of DİB, KDK, MEB and TÜİK,
- Video content should be included on the children websites of RTÜK and TÜİK,
- Informative content for parents should be included on the children websites of BTK, DİB, KDK, MEB, RTÜK, TÜİK and VGM.

Especially child-centered websites that suit childhood years of generation Y, should be renovated considering the technology and internet practices of generation Z. As a result of the spread of mobile technologies, mobile applications have become popular as well as websites. Mobile application solutions will make a significant contribution to the public institutions on delivering their child-centered contents to the target audience.

Keywords: Public Sector, Website, Child Centeredness

KAMU KURUMLARINA AİT İNTERNET SİTELERİNDE ÇOCUK ODAKLILIK

ÖZ

Mobil teknolojilerin yaygınlaşması, internet kullanımını bilgisayara ve mekana mahkum eden anlayışı değiştirmiştir. İnternet erişimi ve bağlantılı kalma durumu artık lüks bir tüketim olmaktan çıkmış, sosyal hayatın temel ihtiyaçlarından biri haline dönüşmüştür. İnternet

kullanımının son derece yaygınlaştığı bir çağda, markaların önemli kurumsal iletişim kanallarından biri olan internet siteleri stratejik bir rol üstlenmektedir. Kamu kurumları sundukları hizmet ve çalışmalarını internet siteleri aracılığıyla kamuoyuna aktarmaktadır. Çocuklar, devlet tarafından sunulan hizmetlerde önemli bir hedef kitledir. Kamu kurumları kendilerini sadece yetişkinlere değil aynı zamanda çocuklara da doğru anlatmak durumundadır. Bu amaçla çeşitli kamu kurumları internet sitelerinde çocuklara özel içerikler yayınlanmaktadır. Kamu kurumları tarafından yayınlanan çocuk internet siteleri ise doğrudan bu amaca hizmet etmektedir. Çocukların internet kullanım ve davranışları yetişkinlerden farklıdır. Bu bağlamda, kamu kurumları tarafından oluşturulan çocuk internet sitelerinin birtakım kullanılabilirlik ve çocuk odaklılık özelliklerine sahip olması gerekmektedir. Çalışma kapsamında kamu kurumlarına ait çocuk internet siteleri kullanılabilirlik ve çocuk odaklılık kriterleri açısından değerlendirilmektedir. Türkiye Cumhuriyeti temel yasama, yürütme ve yargı kurumları ve bu kurumlara bağlı kuruluşlara ait 100 resmi internet sitesi, site haritaları çıkarılarak araştırmaya dahil edilmiş, aktif olarak yayın yapan 9 çocuk internet sitesi içerik analizi yöntemiyle incelenmiştir. Araştırma sonuçları kamu kurumlarına ait çocuk odaklı internet sitelerinin durumunu değerlendirme kriterleri açısından ayrıntılı bir şekilde ortaya koymaktadır.

Anahtar Kelimeler: Kamu Kurumları, İnternet Sitesi, Çocuk Odaklılık

Introduction

Internet usage, which started with personal computers and has become more popular with mobile devices, significantly affects communication between individuals as well as communications of institutions with the public. Traditional methods in corporate communication are now replaced with newer methods and techniques. Today, institutions are using the opportunities offered by technological developments and thus, they simplify service processes through digitalizing and also try to express themselves to the public through digital platforms. Institutional websites come first at the digitalization efforts of the institutions.

In today's world, users can do both personal and official works in a short time with the internet. Internet users visit websites for many purposes such as taking information, shopping, socializing, having fun and making some official transactions. Internet users become customer of these brands and institutions by accessing their websites. According to a survey (2018) conducted by TÜİK (Turkish statistical institute) on the households' use of information technologies, internet usage increased significantly from 48.9% in 2012 to 72.9% in 2018. Besides, the same survey exhibited that, internet usage searching for information on goods and services increased from 59.9% in 2012 to 67.8% in 2018.

Institutions and corporations that offer their goods and services via websites in addition to the traditional methods, must use a fast and functional structure. Internet users are defined as 'impatient' in accessing information, goods and services. For this reason, the usability feature for such websites is an important factor for their success. Due to the rich structure of the internet, alternatives to many goods and services can be available on the websites of different brands. This naturally leads to competition among websites that target similar populations.

Classifying potential visitors is an important matter for the websites aim to provide appropriate content to the target population. Undoubtedly, the target population of a website that providing latest

news and target population of an entertainment website is different. In addition to the demographic characteristics of the targeted population, such as gender, age group, and education level, identifying common interests will contribute to building proper website structure.

Public Institutions and Websites

Public Institutions are the most important element for the communication between state and citizen. States provide information to the public, public officials and other states through the internet. Websites of public institutions provide a more accurate, practical and efficient communication with citizens by enhancing the state-citizen relations (Layne and Lee, 2001: 122). With websites and applications, traditional bureaucratic methods are no longer needed for communication of citizens with public institutions. Many transactions that performed with more time and effort in the past can be completed just a few clicks today.

Websites are an important part of corporate communication for public institutions and related organizations that have direct communication with citizens. Public sector websites should meet with the users' expectations and also reflect the culture and identity of the institution. The communication carried out through corporate websites has an important effect on the corporate image. Institutions use websites in various ways for public relations activities. Many information about the institution such as vision, mission, activities, public statements, activity reports, photographs belongs to the goods and services of the institution, research reports, statistical information, executive speeches, and projects are presented on the websites (Bayçu, 2012: 83). This kind of information provides the citizens to be aware of the developments in various fields and also allows them to make choices. Information such as actions, policies and plans have importance for citizens (Chand and Ramesha, 2017: 346).

The design of public sector websites must aim to increase user satisfaction and service quality. In the public sector websites, mostly the features of the website and visual aesthetic elements are considered as important. User-Centered design is mostly not adopted (Durmuş and Çağıltay, 2012: 3). According to Wang and Lo (2012:134); trust in government, ease of circumstances, perceived benefit, perceived ease of use, and attitude for use of government websites are the effective factors on the intention of citizens to use government websites. In addition to this, trust on the internet, self-sufficiency and subjective norms have also some impact on citizens.

All citizens those who are an internet user can access information provided by public sector websites. Designed websites should have features that users of all ages can easily use. Public sector websites should have special sections, especially for children and disabled ones. Children and disabled citizens have different internet usage skills than normal users. Guidelines for Governmental Web Sites (2019) particularly highlights user-centered design among the principles of usability. The design and contents of the website should be tailored to the target population.

Child Centered Internet

Twenty years before today, the internet was not very common in some developing countries. With time, the internet became widespread and an important element of daily life. Early on, kids did not have an internet connection at their home and school. With internet access, the opinions of teens and especially kids are changed, and they established a relationship with the internet (Chhachhar et al., 2014: 40). The internet usage pattern of children has changed over time. Today the relation of children with the internet is not limited with access to information, it has many other forms.

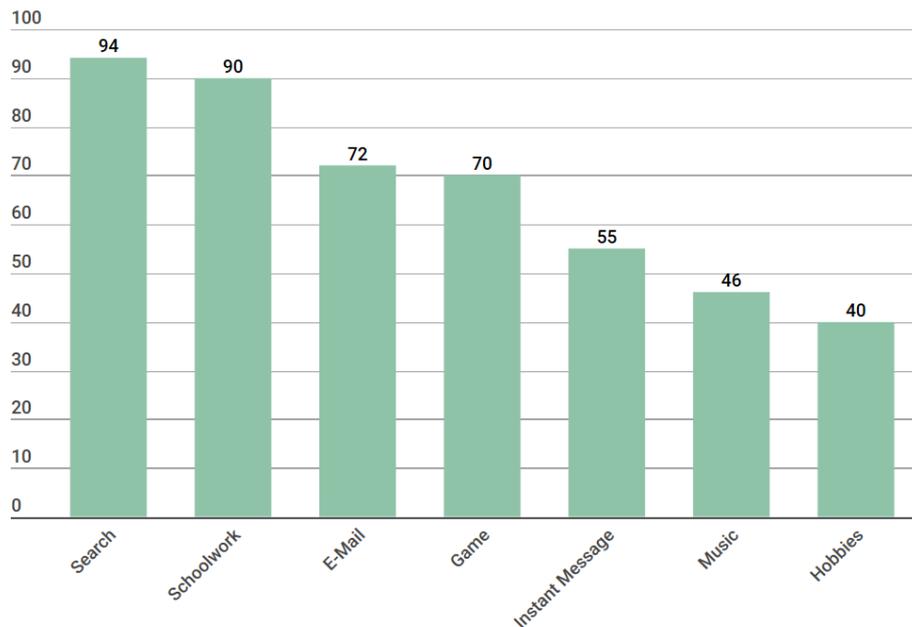


Figure 1: Online Activities of Children

Source: Livingstone & Bober, 2005.

According to the results of a study performed by Livingstone and Bober (2005), children use the internet most often for searching for a topic (94%). Additionally, making homework (90%), using e-mail (72%), game (70%), instant messaging (55%), music (46%) and hobbies (40%) are other frequent online activities of children.

According to the UNICEF research that states digital technologies has already changed the world and every passing day more children accessing the internet (2017: 1);

- One of the three internet users in the world is children and teens under the age of 18.
- Data indicate that children begin to use the internet to an increasingly early age.
- Digital technologies offer educational opportunities for children.

There are various reports on the internet usage of children in the literature. A study conducted by Family PC (1997) revealed that children mostly use the internet for games and activities (41%), for taking information about subjects they like (29%), and finally for graphics, audio and video (10%). Today, children begin to use the internet at a very early age and use the internet both for amusement and educational purposes (Mazzarella, 2005). According to a study of Rideout and Hamel in 2006, 18% of children under the age of 7 are online.

Older children spend more of their time online. Especially 8-10 years old children prefer kids TV, early childhood activities and websites offer imagination supported video games. Children aged 11-12 show behaviors focused on gaining independence, form peer bonds and developing a sense of identity (Blackwell et al., 2014: 13). Children and teens have different expectations from websites. Websites that focus on children as a target audience should classify their contents according to age groups and give users different options.

Expectations of children from a website and usage patterns show some fundamental differences compared to adults. On this topic, the results of the study conducted by Sherwin and Nielsen (2010) is given in Table 1.

Table 1: Website Usage Patterns of Children and Adults

		Children	Adults
Small Difference	<i>Willingness to wait</i>	Want instant gratification	Limited patience
	<i>Multiple/redundant navigation</i>	Very confusing	Slightly confusing
	<i>Back button</i>	Used in apps and websites when prominent, but browser <i>back</i> button not used (young children) Relied on (older children)	Relied on
	<i>Reading</i>	Not at all (youngest children) Tentative (young children) Scanning (older children)	Scanning
	<i>Readability level</i>	Each user's grade level	8 th to 10 th grade text for broad consumer audiences
	<i>Font size</i>	14 point (young children) 12 point (older children)	12 point (up to 14 point for seniors)
	<i>Scrolling</i>	Avoid (young children) Some (older children)	Some
	<i>Standard gestures on touchscreens (tap, swipe, drag)</i>	Large, simple actions (young kids) Easy and well-liked (older kids)	Easy and well-liked
	<i>Search</i>	Bigger reliance on bookmarks than search, but older children do search	Main entry point to the Web
Big difference	<i>Goal in visiting websites</i>	Entertainment	Getting things done Communication/community
	<i>Exploratory behavior</i>	Like to try many options Mine-sweeping the screen	Stick to main path
	<i>Real-life metaphors e.g., spatial navigation</i>	Very helpful for pre-readers	Often distracting or too clunky for online UI
	<i>Physical limitations</i>	Slow typists Poor mouse control	None (unless they have disabilities)
	<i>Animation and sound</i>	Liked	Usually disliked
	<i>Advertising and promotions</i>	Can't distinguish from real content	Ads avoided (banner blindness); promos viewed skeptically
	<i>Disclosing private info</i>	Usually aware of issues: hesitant to enter info	Often recklessly willing to give out personal info
	<i>Age-targeted design</i>	Crucial, with very fine-grained distinctions between age groups	Unimportant for most sites (except to accommodate seniors)

Source: Nielsen, 2010.

Study of Child Centeredness on the Public Sector Websites

Method

To purpose of the study is the determination of the public sector websites focus on children as a target audience, and evaluation of these websites according to general usability and child-centeredness criteria.

As of 20.07.2019, the main legislative, executive and judicial institutions of the Republic of Turkey included in the www.turkiye.gov.tr and 100 official websites belonging to these institutions are involved in this research by determining sitemaps. It was determined that 9 of the 100 websites have an active website or a section for children. The sample of the study was consist of 9 child-centered websites of public institutions.

As a qualitative research technique, the content analysis method was used for investigation of data included on the child-centered public sector websites. In determining the methodology of evaluation criteria, "Guidelines for Governmental Web Sites v2" developed by TÜBİTAK and "User Experience Design for Children" developed by Nielsen Norman Group were taken into account. For analyses, 10 main usability and 10 child centeredness, a total of 20 criteria were determined. Content analysis was carried out between 20 July and 1 August 2019.

Findings

Public sector websites that publish a section for children are listed below.

Table 2: Child Centered Public Sector Websites

	INSTITUTION	CHILD CENTERED WEBSITE / SECTION
1	Information And Communication Technologies Authority (BTK)	http://www.guvenlicocuk.org.tr/
2	Religious Affairs Administration (DİB)	http://cocuk.diyamet.gov.tr/
3	Ombudsman Institution (KDK)	https://www.kdkcocuk.gov.tr/
4	Ministry of National Education (MEB)	http://cocuk.meb.gov.tr/
5	Radio and Television Supreme Council (RTÜK)	https://www.rtukcocuk.gov.tr/
6	Turkish Radio and Television Corporation (TRT)	https://www.trtcocuk.net.tr
7	Turkish Statistical Institute (TÜİK)	www.tuik.gov.tr/TuikCocuk
8	Directorate General of the Foundations (VGM)	https://www.vgm.gov.tr/Sayfalar/SayfaDetay.aspx?SayfaId=76
9	Directorate General of Migration Management (GİGM)	https://www.uyumcocuk.gov.tr

It was determined that 9 of the 100 public sector websites have an active section for children. Websites having connection problems were not included in the study. Information And Communication Technologies Authority, Religious Affairs Administration, Ombudsman Institution, Ministry of

National Education, Radio and Television Supreme Council, Turkish Radio and Television Corporation, Turkish Statistical Institute, Directorate General of the Foundations and Directorate General of Migration Management institutions have special contents for children on their websites.

Table 3: Main Usability Indicators

Indicator	BTK	DİB	KDK	MEB	RTÜK	TRT	TÜİK	VGM	GİGM
Independent Domain name/Subdomain name	+	+	+	+	+	+	-	-	+
Loading Speed	97	92	90	93	45	66	90	79	95
Good First Impression	+	+	+	+	+	+	+	-	+
Responsive Design	+	-	-	+	-	+	-	-	+
Menu and Navigation	+	+	+	+	+	+	+	-	+
Search Feature	-	+	-	-	-	+	-	+	-
Incorrect links	-	-	-	+	+	-	+	+	-
Commercial Advertisement	-	-	-	-	-	-	-	-	-
Accessibility for Disabled	-	+	+	-	-	-	-	-	-
Contact Information	-	+	+	+	-	+	-	+	+

Coding: Included (+) | Not included (-)

Independent Domain name/Subdomain name: When the child-centered public sector websites are examined, it is seen that generally an independent domain name or subdomain name is assigned. If independent domain names used, visitor can remember the address of the website and make subsequent visits easier. As seen in Table 3, while BTK, KDK, RTÜK, TRT and GİGM use independent domain names, DİB and MEB prefer to use subdomain name connected with the corporate domain name. It is seen that TÜİK and VGM do not have independent domain names or subdomain names for children pages.

Loading Speed: According to the Guidelines for Governmental Web Sites Project performed by TÜBİTAK, internet users prefer to close slow loading websites instead of waiting. When the loading period takes more than 3 seconds, the internet user gets distracted and gives up the process because he thinks that there is a problem (Kamis, 2019). Children websites of public institutions that included in this study were evaluated according to the loading speed criterion using Google Page Speed Insights. Page loading scores are rated below according to Google Page Speed Insights (Google, 2019):

- 0 – 49: Slow
- 50 – 89: Average
- 90 – 100: Fast

According to the analysis results, children websites of BTK, GİGM, MEB, DİB, KDK and TÜİK were ranked as “fast”; TRT and VGM were ranked as “average”, and finally RTÜK was ranked as “slow” according to loading speed.

Good First Impression: Homepage is the first thing when users visit a website. According to KAMİS, the websites have a good first impression are considered as more reliable, more useable and preferred by users. The websites that not have a good first impression are quickly abandoned and not preferred by users, even these websites include useful content and functions (Kamis, 2019). When users

decide to stay or leave a website, they value the feelings provided by all experiences related to the website. The characteristics of the website such as interaction, layout, design, and ease of access to content are important factors for a good first impression (Derome, 2015). It is found that all reviewed children websites of public institutions have good first impression except Directorate General of the Foundations.

Responsive Design: Thanks to technological advances, access to digital content is no longer limited with personal computers. As a result of the growing interest in mobile devices, websites have had to adapt their design for mobile devices such as tablets and mobile phones. Schade (2014) stated that, responsive designs should support many devices and, to provide usability, performance, design and content properties should be considered for all devices. Child-centered public sector websites were evaluated according to having a responsive design feature by accessing with different devices such as computers, tablets and mobile phones. Child pages of BTK, MEB, TRT and GİGM have responsive design features. However, child pages of other institutions do not have responsive design features.

Menu and Navigation: When users access a website, they seek visual clues to find contents they are searching for (Esser, 2018). The most distinct way to access grouped contents is menu and navigation. Menu and navigation of websites should design to provide easy navigation and have links to correctly classified contents. All children websites of public institutions included in the study except Directorate General of the Foundations have practical menu and navigation systems.

Search Feature: Search is an important feature provides to access requested information that users seek in a website with rich content. According to Nielsen (2001); with the search feature, users can act independently without using the referrals of the website. Users just focus on finding what they are looking for, they do not want to navigate between pages, and use directly search function. Among the public institutions included in the study, only children websites of DİB, TRT and VGM have a search function.

Incorrect links: The characterization of a website by users as reliable and valuable is an important factor that affects the quality of user experience. Incorrect links negatively affect the usability of the websites (Kamis, 2019). There are incorrect links on the children websites of MEB, RTÜK, TÜİK and VGM. Incorrect links cause long waiting, and redirect to not responding or blank pages, and therefore discomfort users.

Commercial Advertisement: Children may have difficulty to distinguish between commercial advertising and the real site content, and thus may be exposed to different contents. An amusing character inviting the user to a game can be a product advertising. It is not appropriate for the child-centered public sector websites to include any commercial advertisements other than their services. Commercial advertisements were not found in any of the public sector children websites examined in the study.

Accessibility for Disabled: All visitors of a website may not be completely healthy and normal individuals. To make a website usable for individuals with different disabilities, special pages should be created for them. To make the website accessible for users with different types of disabilities, special pages should be created for them. In the scope of the research, it is determined that children websites of DİB and KDK include special links for disabled. Other public institutions do not include any links for disabled on their children websites.

Contact Information: When users want to communicate, they want to communicate not only with the website but also with the organization and employees. They respond with a question, complain or suggestion (Idler, 2013). Users visiting the children websites of public institutions also communicate for similar purposes. Providing contact information in an easily accessible place on the website, simplify these requests of users. Children websites of DİB, KDK, MEB, TRT, VGM and GİGM include contact

information. However, BTK, RTÜK and TÜİK do not include contact information on their children websites.

Table 4: Child Centeredness Indicators

Indicator	BTK	DİB	KDK	MEB	RTÜK	TRT	TÜİK	VGM	GİGM
Child centered design	+	+	+	+	+	+	+	-	+
Font Size	+	-	+	+	+	+	+	-	+
Vivid colors	+	+	+	+	+	+	+	-	+
Special content for different age groups	-	-	+	-	-	-	-	-	-
Voice/music	+	+	+	-	+	+	+	-	+
Character animation	+	-	-	-	+	+	-	+	+
Video content	+	+	+	+	-	+	-	+	+
Game content	+	+	-	+	-	+	-	+	+
Educational content	+	+	+	+	+	+	+	+	+
Informative content for parents	-	-	-	-	-	+	-	-	+

Coding: Included (+) | Not included (-)

Child centered design: Websites need to design and include content according to the target population. The design of the website should be tailored by considering the demographic variables of the target population, such as gender, age and education. Websites targeting children should be designed using images and colors from the children's world. In this regard, it is seen that all children websites of public institutions, except for the VGM, have a child-centered design. These websites generally include elements such as animal figures, animations and toys. The fact that children websites of VGM do not have a child-centered design independent from the corporate website is considered as a disadvantage.

Font Size: According to Sherwin and Nielsen (2010); font-size should be at least 12-14 pt on the websites developed for children. The font size used on the children websites of DİB and VGM is small on some pages that making difficult for children to read comfortably. This situation was considered on the children websites of other public institutions, and the font size was adjusted so that children could read it.

Vivid colors: The color selection should be considered while designing a website for children. Colors that are attractive to adults are sometimes considered boring for children. Vivid and joyful colors such as red, blue, yellow, green, purple and orange should be preferred (Gross, 2016). In the design of public sector children websites, generally vivid colors are used however, on the children website of VGM vivid colors are not used sufficiently.

Special content for different age groups: While developing a website for children, it is important that including special contents for different age groups. Children internet users are grouped as 3-5, 6-8 and 9-12 years old (Sherwin and Nielsen, 2010). Naturally, the expectations of children at different ages, development levels, and educational levels, from websites will be different. Among the public sector children websites, only children website of KDK has classified its contents for 5-12 and 12-18 age groups. Other public institutions do not have a clear age classification on their websites for children.

Voice/music: According to Gross (2016); child-centered websites should encourage children to use their senses by including interactive music and voices. Using familiar voices will help children to remember and strengthen what they know about the real world. Mostly, child-centered websites of

public institutions include voices and music. On the children website of MEB and VGM, voice and music elements were not observed.

Character animation: Children's interest in animation is an opportunity for children websites. Use of animated characters on websites draws children's attention. Such elements could be sometimes a new character and sometimes an animal or plant from the real world and make the website more entertaining. *İnternet* character on children website of BTK, animated *cat and dog* on children website of RTÜK, *Rafadan Tayfa and Çatlak Yumurtalar* characters on children website of TRT, *Muyu and Her Granddaughter* character on children website of GİGM draw attention. Character animation is not found on the children websites of other public institutions.

Video content: Video content used on the websites attracts the attention of the visitors and increases the effect of the message given. Correctly used video content in a convenient place provides a better understanding of the content provided on the website (Kamis, 2019). Children websites of BTK, DİB, KDK, MEB, TRT, VGM and GİGM contain video content. However, children websites of RTÜK and TÜİK do not include video content.

Game content: Playing has a special place in the children's world. Some interactive and game content catch children's attention. Such contents are effective in teaching a child combined with the game. Game content is frequently used on websites for children. Among the children websites of public institutions reviewed in this study, while BTK, DİB, MEB, TRT, VGM, and GİGM include game content, KDK, RTÜK, and TÜİK do not include game content on their websites.

Educational content: Children websites of public institutions have also a responsibility to train their users. The contents informing children about the institution and services should be selected carefully. Regarding the educational content, children websites should include videos, interactive contents, and games that might be interesting for children instead of text and photos. It is seen that all public sector websites for children include educational websites.

Informative content for parents: Parents, who care about their children's internet use, adopt various methods for supervision and control purposes. Some parents make a list of websites that their children can use, thus trying to protect their children from the risks and dangers of the internet. It is important to inform parents about the purpose, aim and contribution of the website or related page to children. Public sector websites for children should include informative content for parents. Children websites of TRT and GİGM have parental informative contents. However, other public sector websites for children do not have any content for this purpose.

Conclusion and Recommendations

Websites developed by public institutions for children should have usability features. Websites having an independent domain name or subdomain name are remembered easily. Fast loading pages without letting users wait are more preferred. The first impression created during the first visit to the website should be positive. Considering the fact that mobile devices are being used frequently, websites should have responsive designs allowing easily navigating when accessed from different devices. Menu and navigation of the website should provide comfortable navigation. Search function, allowing users to easily find contents they are looking for, should be included on the website. Websites should remove the incorrect links that bothering users. Public sector websites for children should not include commercial advertising. Websites should have special contents for disabled users. Contact information of the institutions should be included on the children websites.

Public sector websites for children should also have child centeredness functions. The user interface design of the website should be child-friendly. The font size used on the website should be enough big so that children could easily read. It is suggested that vivid colors should be used on such websites. Contents of the websites should be grouped for different age groups. Voice, music and video

contents that attract children's interest should be included and animated characters should be used. Educational content, which provides teaching children combined with entertainment, should be used. Informational content for parents about the aims and scope of the website should be included on the children websites.

As a result of the research findings, it is suggested that;

- An independent domain name or subdomain name should be used for children websites of TÜİK and VGM,
- The loading speed of children websites of TRT, VGM and RTÜK should be increased,
- Design of VGM 's children website should be renovated for a good first impression,
- Responsive designs should be applied on the children websites of DİB, KDK, RTÜK, TÜİK and VGM,
- Menu and navigation system of VGM 's children website should be improved,
- The search function should be included on the children websites of BTK, KDK, MEB, RTÜK, TÜİK and GİGM,
- Incorrect links should be fixed on the children websites of MEB, RTÜK, TÜİK and VGM,
- Contents for disables users should be included on the children websites of BTK, MEB, RTÜK, TRT, TÜİK, VGM and GİGM,
- Contact information should be included on the children websites of BTK, RTÜK and TÜİK,
- Design of VGM 's children website should be redesigned as child-centered,
- Proper font size should be set on the children websites of DİB and VGM,
- More vivid colors should be used on the children website of VGM,
- Contents should be grouped according to different age groups on the children websites of BTK, DİB, MEB, RTÜK, TRT, TÜİK, VGM and GİGM,
- Voice and music elements should be included on the children websites of MEB and VGM,
- character animations should be used on the children websites of DİB, KDK, MEB and TÜİK,
- Video content should be included on the children websites of RTÜK and TÜİK,
- Informative content for parents should be included on the children websites of BTK, DİB, KDK, MEB, RTÜK, TÜİK and VGM.

Especially child-centered websites that suit childhood years of generation Y, should be renovated considering the technology and internet practices of generation Z. As a result of the spread of mobile technologies, mobile applications have become popular as well as websites. Mobile application solutions will make a significant contribution to the public institutions on delivering their child-centered contents to the target audience.

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