# The Accessibility, Usability, Quality and Readability of Turkish State and Local Government Websites an Exploratory Study

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#### **ABSTRACT**

With significant development in Internet technology contributing to daily lives in nearly every aspect, it is important that government websites and e-government services offered through them are used effectively, efficiently, and satisfactorily. Achieving accessible, usable, qualified, and readable e-government services that enable citizens to fulfill different users' requirements by everyone involved in the target group, implying a lack of equality between disabled and non-disabled people in benefiting from online governmental services regardless of time and location constraints, has become a global aim. This study investigated whether the websites of the state and local level e-government in the Turkish Republic comply with prevailing standards of accessibility, heuristic usability, mobile readiness, performance and, the readability of website content with six different indices and whether these qualities depend on the type of the government websites. After examining 77 state and 247 local e-government sites, the results indicate that the Turkish government websites have made many of the accessibility, usability, quality, and readability mistakes as predicted. In light of the study findings, this paper will present some recommendations for improving Turkish government websites, as well as discuss future implications.

#### **KEYWORDS**

Accessibility Evaluation, E-Government, Readability, Turkey, Usability, Usability Evaluation, Web Accessibility

#### INTRODUCTION

Recently, web accessibility and usability are becoming major attributes in both developed and developing countries, primarily for public and government institutions that rely on the web for providing the full range of usable, accessible, easy to use, readable, and easily reached services based on mobile readiness for their users. Moreover, electronic government services are expected to expand; thus, guaranteeing equal access for everyone in terms of providing citizens with more effective, efficient, and satisfactory government services that enable everyone to benefit from them and fulfilling different users' requirements based on usability, accessibility, readability, and quality dimensions, regardless of time and location constraints, have become a global aim. Disabled people constitute a noticeable percentage of the world's population (over 1 billion people), obtaining accessible e-government services that enable citizens to facilitate them and carry out different users' demands.

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During the last two decades, governments in developing countries have increasingly accepted e-government as a fundamental means and crucial infrastructure of leveraging their general performance for government interaction with citizens and other stakeholders. Accessibility is crucial to usability. The usability of a website by users with disabilities was assigned as website accessibility. Cognitive, visual, mobility, auditory, or neurological disabilities are related to these disabilities (Loiacono, McCoy, & Chin, 2005). Site usability is a significant constituent of website quality, and as Scott (2005) indicates that the developers of government sites "must regularly monitor and enhance the quality of their sites to attract and satisfy users" as site content and site use raise (Scott, 2005:151). The usability of the website can leverage the trust and success in e-government services. It must be noted that trust is a crucial aspect of people's behavior to e-government websites. The usability of website leveraging trust and success in e-government services and that trust is a crucial aspect in people using e-government (Ansari, Baqar, Hassan & Saeed, 2016; Huang et al., 2009; Mensah et al., 2017; Parent, Vandebeek, & Gemino, 2005; Venkatesh, Hoehle & Aljafari, 2014). Users' trust can be leveraged by usability in e-government. At the state and local level, however, e-government websites often have usability and accessibility violations (Alryalat, 2017; Al-Yafi et al., 2016; Ho, 2002; Youngblood and Mackiewicz, 2012; Shi, 2007; Pribeanu and Fogarassy-Neszly, 2011; Pribeanu et al., 2012; Pribeanu et al., 2014; Akgül and Vatansever, 2016a; Akgül and Vatansever, 2016b; Akgül, 2016a; Akgül, 2016b; Ismailova and İnal, 2017; Ismailova, 2017). These issues become further complicated as the way citizens access the Internet is changing. The Turkish Statistical Institute reports that over forty-three percent of Turkish adults now own tablets, and ninety-seven percent of Turkish adults use the mobile phone (incl. smartphones) (TUİK, 2018). Thus, state and local websites should be usable, accessible, qualified, readable, well coded, and mobile-device ready. 53.2% of Internet users interacted with public authorities over the Internet for private purposes between April 2014-March 2015 in Turkey (TUİK, 2018). This study utilizes usability heuristics and accessibility to investigate 77 state and 247 local government websites and assess whether sites result in better site usability and accessibility. It is essential and reasonable to compare usability, and accessibility of websites depending on the state and local e-government websites.

Usability, accessibility, and readability attributes should be utilized at the design phase, especially in government websites, since they aim to provide prospective users with information about e-services. Poorly designed websites affect usage negatively and reduce website interaction (Baker, 2009; Clemmensen & Katre, 2012). The usability is acknowledged as a crucial reputation aspect of any website to provide the optimum services to the citizens of the developing countries. In this study; to assess usability, 19- dichotomous web usability standards were utilized to each site's homepage, based on prior usability studies (Youngblood and Mackiewicz, 2012; West, 2008; Cappel & Huang, 2007; Galvez, and Youngblood, 2016; King & Youngblood, 2016; Youngblood and Youngblood, 2018; Akgül and Vatansever, 2015). As shown in Table 1, overall design standards; hypertext; navigational standards; readability; language option; and findability aspects have been evaluated.

The websites were checked for their compliance with existing accessibility standards including WCAG 2.0, the World Wide Web Consortium's Web Content Accessibility Guidelines, to assess state and local government websites accessibility (W3C, 2008). A combination of testing was run for compliance, an automated accessibility checker utilized each webpage for its compliance by using AChecker, automated testing cannot easily identify issues followed by manually inspecting the code for that. For instance, the presence or absence of an image's ALT attribute can be identified by using automated testing; but, it cannot promptly verify the usability ALT information.

And also, mobile-device readiness has been investigated by using the HTML and CSS of each homepage. Each webpage was also tested on a mobile device to see whether the webpage responsive to the mobile screen. Responsive Web Design makes your web page look good on all devices (desktops, tablets, and phones). Web technologies using the following guidelines can help to make information accessible to all citizens so that they will have equal accessibility opportunities to all e-government resources at any time and anywhere.

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