E-Cities: A Content Analysis of the Web Pages of Heidelberg and Konya Metropolitan Municipalities

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Abstract: Developments in information and communication technologies affects city administiration as all areas; urban structure and functions are reconstructing according to information and communication technologies. Mentioned digital technologies are reflected in the municipality activities. Today, providing services to urban population –as the basic function of municipalism-, is being carried out by e-municipality method that aims effiency, speed, active participation, low cost and active participation. Especially, popularizing these dynamics by web applications of municipalities is being considered as essential. E-municipality, e-city, e-governance, e-services are outstanding issues at effectiveness of public services. In this context, considering and discussing different samples of e-municipalism with these concerned issuees and dynamics; will provide an important contribution at the studies about using information and communication technologies in municipalities. In this study, a content analysis is performed by comparing metropolitan municipalities of Heidelberg from Germany and Konya from Turkey.

Key words: E-city, e-municipalism, e-service, local democracy and participation

INTRODUCTION

At the present day, with the enformation and communication technologies that rapidly change people's life styles are also changed. Accompanied by the internet's coming into everyday life, the boundaries are removed, possibility of sharing information and cognizance of the new technologies are increased. This development has also effected sustainable urban development; thus, using technology and also e-government applications- has become inevitable for the local governments as it's inevitable for the central government (Bensghir and Akay, 2006).

Accompanied by the e-government applications, internet and web facilities have an active part in administration of the cities. Internet and web technologies are providing opportunities like running administrative and daily datas, interactive online services, contribution to democratization and transparent administration. (Altınok and Bensghir, 2005).

In this context in our day, cities are not the urban areas of the traditional society, but the cities of the digital society. With the spread and diversification of digital technologies, urban structures and services are also restructured and redefined according to these technologies. Digital technologies, which are also defined as information technologies, transform cities from being local and inhibited social, economic, political and cultural living spaces to global centres. These technologies carry urban and local values into the global area. This interaction brings about mutual development and enrichment. Settlement areas are included in a wide interaction network through regional, national and global links.

Cities using e-municipality systems on the one hand provide services to their citizens, and on the other hand open ways for interaction and cooperation. The prevalence of E-government technologies has provided the presentation and the widespread use of urban services by means of these resources. Countries both equip cities with e-government facilities featuring multimedia technologies and also present significant efforts to enable the use of these opportunities by more people based on their capacities for providing and using the information technologies.

We know that the countries have been competing against each other to achieve this objective. However, we can state as well that the cities are also in a race to become the pioneers in this matter, to be part of the global system by using information technologies, to share the local economic and cultural values with the global society and to offer effective, fast, cheap and simple services to their citizens. Everyday, new web applications developed by almost every country come to the fore with their different aspects, serve as a model for other cities and speed up the competition. E-municipality, e-democracy, e-city, e-election, e-citizen, e-governance, e-service and the effectiveness of public services are the concepts and issues that are particularly emphasized in these applications.

The studies on this topic in Turkey, have introduced important conclusions in terms of efficency and

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functionality of e-municipality applications. For instance in Yıldız's study (1999), of which 30 municipalities displaying activity on internet have been examined, it's shown that the municipality websites are used as a presentation instrument, not for an interaction with citizens or providing information or services.

In Bensghir's studies (2000a; 2000b; 2001a; 2001b; 2001c; 2001d) of which Ankara, İzmir, Bursa, Kayseri, Konya Metropolitan Municipalities' websites have been examined in terms of e-government service applications; it's shown that excluding İzmir Metropolitan Municipality, all other municipalities' perception of this new communication and administration instrument based on an average brochure mentality which only runs as a one-way data transmission and advertising of the municipality services.

Parlak and Sobacı's empirical study on Turkey's 16 metropolitan municipalities' web based services and their functionality, indicates that municipality services are inadequate in terms of e-government applications (Parlak and Sobacı, 2008).

When considered from these perspectives, it is certain that the comparison of examples belonging to different political, administrative and cultural worlds in e-municipality services will provide significant contributions to those who are interested in the issue, and also will help to achieve better results through the discussion of the positive and negative aspects of e-municipality applications. Also in the present study, the web pages of Heidelberg Municipality from Germany and Konya Metropolitan Municipality from Turkey are compared and a content analysis is performed.

E-Cities: The Electronic Dimension in the understanding of service and democracy: First of all, we briefly touch upon the question of what e-structuring means. Certainly, there are different expectations and multidimensional analyses. However, it should be mentioned in brief that the concept "e" is perceived as "effectiveness", "efficiency", "participation" and "social and economic development" and meanings much more than electronic environment are attributed to the concept (Arifoğlu, 2004).

The term e-city or digital city has been widely used in the urbanization literature in recent years. The conceptualizations regarding e-cities began to emerge in the 1990s. The term was used as telematic city (Lohmann, 1997) especially in its initial uses. However, the terms e-city (e-kommunen) or virtual city (online city) are more commonly used than telematic city. Regardless of the term used, what is ultimately meant by the concept are electronic devices and virtual cities created via these devices and the related mechanisms? One of the two basic characteristics, which define e-city, is the redesigning and forming of a city thoroughly by means of digital technology and the restructuring of the infrastructure through digital technology applications. The other characteristic defining the concept is that the economic, financial, interpersonal communication, telecommunication, management and political functions of the city are associated with the entire world with the help of electronic technologies (Schuler, 2001). Information technologies used in local/urban governments are generally known by names as e-government, service providing applications, tele-collaboration and multimedia. Besides, the concept of "electronic automation" is also used (Michael, 2009).

These new technological developments and rearrangements that need to be made based on information technologies have completely changed the traditional structure and outlook of the city and revealed a new urban view and structure through which it is possible to easily access every unit, structure and connection of the city. This new view and structure is such that in urban areas e-cities are widely made use of in areas such as social guidance, education, city planning, job opportunities, disaster and crisis management and social state studies (Börner, 2002). Today, cities gradually become digitalised in terms of all types of infrastructure, such as transportation and communication, and introduction and institutionalisation; all traditional perceptions are broken one by one.

Today, cities gradually depart from traditional perceptions, structures, functions, symbols and images and are restructured as a new whole of different images and meanings. The restructured cities gain different functions and a completely new identity with communication technologies and automation infrastructures. The new city is recognised with the image of "global information city" (Tankut, 2002) and invests in this new image. Cities, in a new sense shape their development and improvement strategies according to these new developments.

The concept and content of e-city is not independent of the concept of e-government. E-city should just be perceived as a part of e-transformation by means of e-government. E-government is the implementation of information technologies by government agencies. These technology-based applications express not only the change in traditional communication and interaction, but also a total transformation in every area. These Technologies have the ability to transform relations with citizens, businesses, and other arms of government (Mobile Government, 2003). E-Government is defined as the use of ICT tools such as the Internet, mobile computing and cellular phones by government to streamline processes and transactions (Deane, 2003).

Sometimes, there might be inflated expectations regarding the benefits obtained from e-government applications. This is also the case for e-cities. However, if we have to briefly summarize, the expectations from e-government include (Deane, 2003):

- Make the working of the government more efficient and effective
- Disseminate information about government procedures and rules
- Save costs and capture revenue
- Improve service delivery to citizens and businesses and other arms of government

In short, the general expectations of governments from e-government applications are as follows (Altınok and Bensghir, 2005): 1- Efficiency in the production of services; 2- Efficiency in the presentation of services, and 3- Contribution to the democratisation of the entire management system.

E-cities that are shaped by e-government resources and facilities are gradually becoming more important both in Turkey and in every part of the world. Their capacity of using technology and having qualified experts and adequate financial resources could take cities to an advantageous or a disadvantageous position.

E-cities signify the change in traditional service providing methods, as well as the change in democratic mechanisms. While traditional city governments face significant problems regarding quality, cost and economic income, e-cities are considered as an opportunity for solving all of these fundamental problems (Akıncı, 2009). These traditional services and ways of solutions would evoke different meanings for developed and developing countries. In developing countries like Turkey, all the municipalities face problems of institutionalisation. Therefore, even traditional service providing methods are quite problematic when compared to developed countries, because municipalities have significant structural and functional problems in our day (Çukurçayır, 2006). Within the scope of e-government applications, finding the required qualified personnel, difficulties in financial matters and the prolongation of the institutional adaptation process can be mentioned among the most significant problems of e-city models. Alongside these difficulties, in developing countries the problems of poverty, inequality in the distribution of income and lack of education result in people staying away from technological opportunities. It is observed that even in developed countries, a significant part of the people remains distant to these applications (Plamper, 2003).

E-cities have certain advantages compared to general e-government applications. First of all, local governments can implement e-government applications more easily owing to the flexibility they have in their service structure and the fact that they provide services in a smaller scale when compared to general public administration. This is a situation, which is valid for both participatory government applications that will be realised together with the citizens and the presentation of several services (Uçkan, 2003).

The problems of traditional city governments can be specified as those encountered in the areas of service quality, effectiveness, efficiency and democracy. It is generally accepted that e-city systems play a very significant role in overcoming these problems. However, although it was aimed to communicate with the municipalities of 81 provinces in the electronic environment in a study conducted in Turkey in 2005, a response was received from only 10% of these municipalities (Çukurçayır and Sipahi, 2005). The study was repeated in 2008, and unfortunately, it was observed that there had not been a significant development in the level of sensitivity and interaction. This result shows that the e-structuring applications in cities were designed not for functional but for visual purposes.

MATERIALS AND METHODS

In this study, Konya and Heidelberg Cities' websites will be analysed and compared in terms of e-structuring of Konya and Heidelberg Metropolitan Municipalities in October 2009 term.

The content of the web pages of cities generally include introductions, information regarding democratic applications and services and interaction mechanisms. In this study the web pages of Heidelberg and Konya Metropolitan Municipalities are comparatively analysed in terms of these three features. Benchmarking is a method, which can provide significant contributions regarding comparisons between the cities and mutual learning processes. Certain research and education institutions related to the local governments in Germany (e.g. KGSt) have institutionalised this method of comparison. This mechanism, which provides an opportunity to compare the efficiency and effectiveness between local governments, serves as an interaction network (IKO-Netz: Interkommunale Leistungsvergleich) among the municipalities for performance comparison (Anonymus, 2009b). Another important point regarding e-cities is that e-opportunities facilitate, accelerate and diversify the interaction of the urban society with the city government.

There is a big difference between Heidelberg and Konya in terms of population. While the population of Konya is about 980 thousand, the population of Heidelberg is approximately 140 thousand. However, Heidelberg is also a metropolitan municipality like Konya. In this study, the web pages of the two cities were examined and evaluations were performed on the content regarding introduction, local democracy and e-services through the content analysis carried out based on the similarities and differences between the pages (Anonymus, 2009d).

RESULTS AND DISCUSSION

City Introduction: Firstly, information regarding the introduction of the cities is presented on the web pages of

the municipalities. The first thing that attracts attention on the web site of Konya Metropolitan Municipality is that the content is translated into English, German, Japanese and Korean, while the only foreign language present on the web pages of the city of Heidelberg is English.

While more information, more photographs and other visual content are presented on the web pages of Konya, photographs exist only in the upper part of the web pages of the city of Heidelberg and textual links are presented regarding other components. When these links are clicked on, pictures, figures and statistical data are displayed on the screen (Anonymus, 2009a, c).

Other features of the pages regarding introduction are presented in Table 1.

As it can be seen in the table, although there are similarities in "introduction" content between the websites, there are also important differences. For example, sections providing important information like "local agenda", "neighbourhood societies" and especially "urban development" do not exist on the website of Konya. The content that stands out on the web pages of Konya is Mawlana, who has now become a global value. Furthermore, a different dimension that is presented on the pages is "food culture". It can be stated that the city is introduced in a more traditional manner on the website of Konya.

Local Democracy and Interaction: E-city applications are considered as a new insight and opportunity in terms of local democracy. Starting out from the e-forms on which the city, the individual and the voter become digitalised, it is obvious that the future is shaped in this direction and this situation will gradually become the life style of almost every individual. E-city applications provide significant opportunities for the city dweller both in easily accessing local political mechanisms and persons and in conveying his expectations and complaints (Anonymus, 2009a, c).

When the web pages of Konya and Heidelberg are examined in terms of their democratic aspect, applications which provide an opportunity for direct interaction and present a centralist view (Table 2), such as "Message to the Mayor" and "Open Door" are noticeable on the web pages of Konya, on the website of Heidelberg, however, it can be seen that special units are formed to increase communication with the citizens and learn their expectations, and facilities are provided to enable similar interactions with almost every unit. Based on the determination that the "Consultation hours" that were particularly common in the 1990s are not much seen today, it should be mentioned that the continuation of this practice (Sprechstunde /consultation hours) in Heidelberg is so much important (Anonymus, 2009a, c).

It is possible to interpret the online broadcast of the council meetings and the existence of information and activities regarding disadvantaged social groups (women,

Table 1: Introductions of the Cities

Konya	Heidelberg
• The slogan "The City of the World, Konya" and introduction in other languages	• Section presenting information regarding the city, entitled City Information (Stadtinfos)
• The History of Konya	• Data
• Tourism in Konya	• Local Agenda
• Food Culture in Konya	• Fees and Taxes
• Konya in Photos	• Urban Development
• Information on Mawlana Rumi	• Partner Cities (Partnerschaft)
	• Neighbourhood Societies
	• Statistical Information

Table 2: Democratic Opportunities on the Electronic Environment

Konya	Heidelberg
• Open Door	• Electronic Citizens' Services (Technisches Bürgeramt)
• City Council	• Link to send complaints (regarding the employees and services)
• Information	• Announcement of the consultation sessions (conversation hours) of the Mayor of the Metropolitan Municipality
• Council Agenda	
• Message to the Mayor	
• City Guide	
• Information regarding Vocational Courses (KOMEK)	• Online City Council meetings
• Cemetery Information System	• Information regarding the 13 district councils
• City Guide (Supported with online cameras)	• Days and hours of meetings with the entrepreneurs
	• Detailed information regarding the programmes, councils and formations about foreigners, women, teenagers, children, people with disabilities, senior citizens
	• Information on tourism and congresses
	• Information on sports and the promotion of sports
	• Information on entertainment, travel and leisure opportunities

children, senior citizens) on the website as a part of the democratic sensibility and the responsibility of the municipality for the citizens.

E-Cities and E- Services: One of the most significant dimensions of e-cities is that they facilitate the offering of certain urban services on the electronic environment. The services provided on the websites enable the citizens to solve various problems through computers and supportive communication technologies without stopping by the municipality or related institutions. Some of these services are not provided as full services, but offered in order to shorten the service and work processes. The detailed entries regarding the two cities taken as sample in this study are presented in the following table. When the entries are observed, it can be seen that Heidelberg is ahead of Konya in many points (Anonymus, 2009a, c).

It is stated over the "e-services" link on the website of Konya Metropolitan Municipality that services such as open door, bill inquiry, document tracing and payment can be accessed 7 days 24 hours. As it is seen in Table 3, it can be said that only the water bill inquiry and payment services are provided within e-services. The services provided by the municipality besides those mentioned can be listed as specification forms downloads and information on related issues. The others are information and introduction services.

Table 3: E-Services in Konya and Heidelberg Metropolitan Municipalities

Konya	Heidelberg
• Tender Announcements	• Waste collection dates and hours for streets and alleys according to types of waste (bio wastes, paper, glass-metal and other wastes)
• Water Bill Inquiry and Online Bill Payment	
• Lost Property	
• Consultation Services (Open Door)	• Consultation Services
• Access Information	• Online licence application
• Information on Fire-Insurance Tax and Specification Form	• Parking permits for residence owners
• Notice-Advertisement Tax Announcements	• Applying for a registration certificate for a purchased car (steps to accelerate the process)
• Licence Transactions and Application Form	• Online access to city libraries
• Document Tracing	• All Companies in the City and communication information
• Internet Filtering Program (TEmizNet for families)	• Land and property market
• Public Transportation Card Information (Elkart)	• Important up-to-date and legal information regarding every sector that might come to mind about life (Lebenslagen)
	• Data bank for the residence addresses of contacts
	• Application forms for all types of foundations and institutions
	• Information on the radio stations and the media in the city
	• Address information on the city plan (all local and regional foundations and institutions)
	• Dates of important meetings held by all the departments of the municipality
	• The calendar of events and activities to be organised
	• Where and what can I find? (Information about all kinds of needs about schools, firms and social life)
	• The City Ombudsman and work information
	• Complaint and Acknowledgement Line (a telephone line for messages of complaints, comments and acknowledgements)
	• Volunteers line and Coordination centre (Engagement)
	• Information on voters and political geography
	• The city plan and information on city development
	• Detailed information regarding traffic and transport
	• All kinds of information and documents for entrepreneurs (under the name of City Marketing)
	• Poverty data of the city and programmes to fight against poverty
	• Environmental problems: Programmes and processes

It can be said that a significant effort is made to provide a multidimensional interaction with the inhabitants of the city and to maintain the continuity of the services through the link named "Citizens' Services" given on the web portal of the city of Heidelberg. "Message to the Mayor" and "Open Door" services attract attention on the website of Konya. It can be said that Heidelberg provides an e-city system aimed at serving institutions and individuals from almost every sector, while Konya presents general information and headlines on its website (Anonymus, 2009c; Anonymus, 2009a).

On the website of Heidelberg, it is mentioned that social politics is aimed at strengthening tolerance and the attachment of the Heidelberg citizens to their city.

Furthermore, the slogan "The city of science with its elite universities" exists in the section of the website about education. The presentation of the present city plan and the announcement of the objectives regarding city development to everyone for informing purposes should be accepted as one of the most important pieces of information showing the openness and accountability of the local government (Anonymus, 2009a, c).

It is seen that a special focus is given to the introduction of the city and city marketing (Stadtmarketing) on the website of Heidelberg under the title of Powerful economy/ entrepreneurship centre (Standort).

The data presented in Table 3 shows that Heidelberg has created an important e-city system for providing detailed information and services with general titles such as "Citizens' Services", "Local Policy and Government", "Social Issues", "City Information", "Culture and Leisure", "Tourism", "Different Social Groups", "Education, Science and Research", "City Planning, Reconstruction and Housing", "Traffic", "Economy", "Environment and Nature".

It can also be pointed out that Konya has built an e-city intended for informing the citizens about current problems and certain matters, but it lacks in various dimensions compared to Heidelberg.

CONCLUSION

Although there are important similarities between the web pages of the two cities regarding introduction, interaction/democracy and e-services, there are also important differences. There are special links to information regarding the planning of the "Old City Centre" for children and the old city centre in particular, and sections such as the perspective of Heidelberg and "the city of trams" on the website of Heidelberg. Furthermore, it can be stated that the pages are designed in a more responsible manner in terms of communicating and interacting with the citizens.

Moreover, while Heidelberg is introduced on the web with the slogan "Tradition meets with the future", Konya is presented with the slogan "The City of the World, Konya". While in the former identity, culture and history are emphasised, in the latter, the emphasis is on an image integrated with the global system.

Although Konya is nearly seven times bigger than Heidelberg in population, comparing the information and mechanisms presented on the web pages it can be said that Heidelberg is far ahead of Konya with its multidimensional democratic, economic, social, cultural and political accumulation and the information it provides. It is obvious that there are various points in terms of content and form, which the two cities will learn from each other.

This determination is valid not only for Konya, but also for the e-structuring of many of our cities. As the

research results presented in previous sections show, although our municipalities have websites, which are built in a highly effective way in terms of the introduction of cities and mayors, they are relatively reserved and slow in providing democratic and urban services. However, as it can be seen in advanced examples, there are numerous services and information that e-cities can offer. There are unlimited opportunities to maintain political, economic, social and cultural integration with the global system and to learn from this system in order to contribute to the development of the city. It is necessary for our cities to seriously focus on these opportunities.

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