

# **Evaluation of Information Systems and Records Management Practices of 22 State Universities of Turkey in the Framework of International InterPARES Project supported by TÜBİTAK**

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## **ABSTRACT**

The development of the official communication flow with the opportunities of the electronic environment is a must of the modern state concept. In this formal communication and records management practices in 22 Turkish state universities evaluated within the framework of e-records management perspective. E-record management applications within the scope of e-government in Turkish universities have been limited. Even though the central government has set up administrative and legal arrangements on the related issues, the studies carried out for planning, regulating and supervising e-government and e-records management applications have remained insufficient.

It is observed that the activities towards electronic records management applications in Turkey have advanced to a certain point. However, problems persist in certain fields such as, insufficient technical support, adaptation of national regulations to organizational level, need of education and instruction, need of national wide, higher educational level regularity committee on electronic records management procedures. At this juncture, it will be beneficial to compare the conditions of the activities towards e-government applications in Turkey with the conditions in the countries with similar qualities.

**Keywords:** Organizational information management, Records management, InterPARES, TÜBİTAK

## **1. INTRODUCTION**

Changes in managerial approaches with the transition to information society, developed standards, assessment tools, legislations and regulations bring new dimensions to management of organizational information. Organizations managing daily workflows according to internal and external interactions, should use, develop and implement information systems that have different functions for different information assets. Furthermore, organizations should also follow updates related to information system. In this regard, universities with their organizational structures come into prominence among the organizations that are carrying their work processes out with information systems. In this context, this study has revealed the similarities and differences of the practices, and exposed the consistency and interoperability problems in current situations of organizational information and records systems at 22 universities in Turkey via structured survey.

In this context existing conditions, problems, and expectations in the applications of electronic information systems and records management in Turkish universities are evaluated. The main goal of the study is to define to what extend the applications in information and records services in electronic environment are compatible with the expectations.

In this study, data were acquired from field surveys conducted in Turkey within the framework of the project InterPARES supported by TÜBİTAK that national scientific organization of Turkey. Field survey methodology was used in the study. Analysis data obtained from 1545 participants in 22 institutions. The analysis was carried out in order to identify the conditions and problems in institutional information systems and electronic records management. Findings indicate that there are deficiencies in the managerial applications of organizational information and records systems of universities and they need revisions and improvements in some important points with regard to the processes.

### **1.1 Methodology**

In this study, the action research method is used. Action research is defined as pre-planned and constituted systematical inquiries based on cooperation for the purpose of increasing the quality of life by means of critical reflection and interrogation (Greenwood & Levin, 2003). This study depends on findings acquired from the analysis carried out by the Turkish Team of InterPARES 3 Project. Contextual analysis, records, records keeping and policy analysis are based on the InterPARES 3 Project methodology. Each of the field surveys under the following titles was conducted in 22 different institutions and the required data was obtained. The “descriptive statistics” was used for the analysis of the questionnaires. The study of descriptive statistics includes figures or frequencies, percentages, the arithmetic mean, the mode, the median and gradients (Baş, 2001, p.128). SPSS (Statistical Package for Social Sciences) computer program was used for the assessment of the findings, which were, in turn, interpreted by using radar charts.

### **1.2 Electronic Records Management**

A significant number of e-government applications, which is the transfer of the communication and the information exchange between government and citizen into the electronic environment via internet and telecommunication utilities, may be addressed within the scope of e-records management. The transfer of records management applications into the electronic environment and the development of digital signature and e-government applications gained impetus in the middle of the 1990s. (Lee, 2005, p.99). Records have been used traditionally as documentary sources (Kunis and Schwind, 2007, p.191; Rosenfeld and Morville, 2002, p. 221). Records management works in the institutions includes the process from the creation to the disposition of the records for the purpose of official communication or confirmation (Batley, 2007, p.141). With respect to the distinctive features of electronic records vis-à-vis records that are produced in electronic environment, Duranti (2001, p.4) underlines six factors. These factors are listed as: the medium, the content, physical and intellectual form, function, archival value and legal and administrative conditions of the records. In spite of the positive environment created by electronic record management applications, there are a number of problems. It is accepted that much more effort is needed than it is in the printed environment with respect to the long term

preservation and security of e-records (Duranti, 2001; InterPARES Project, 2008). This information is unlikely to be part of a formal recordkeeping system but needs to be managed and is potentially discoverable, in the legal sense of the term (McLeod, Hare and Johare, 2004). The current discussions on these issues still persist. (InterPARES Project, 2008). The regulations in the field of records management starting with the AS 4390 (McLeod, Hare and Johare, 2004), and improving with ISO 15489 and *MoReq*, are at the same time aimed at overcoming the problems encountered in the electronic records management and building the required infrastructure in the field (Blazic, 2007, p.1; Kunis, 2007, p.191). In this contribution, the concepts authenticity and integrity are used as they have been defined by the InterPARES project (InterPARES Authenticity Task Force 2002, pp. 2–3). Authenticity and integrity are essential characteristics of a reliable or trustworthy record (Kulcu2009).

## **2. DEVELOPMENT OF ELECTRONIC RECORDS MANAGEMENT IN TURKEY**

The basic regulation guiding records and archiving studies in Turkey is the “Law on Amended Decree Law on Disposing Redundant Records and Materials” is basic regulation that guide to archive and records management works in governmental organizations. In addition regulation on State Archiving Services which accepted in 1988 presents an application model for institutional records procedures. This regulation revised and “Regulation on Amending the Regulation on State Archiving Services” decelerated in 2001. As part of e-government and electronic records management applications “Law on E-Signature” accepted in 2004 after one your of the acceptance of “Law on Freedom of Information” that is also includes very important clause on governmental records management procedures. As part oof the records management diplomatic, “Regulation on Principles and Procedures to be Applied in Official Correspondence” and “Prime Ministry Circular on Standard File Plan were implemented in 2004. In addition to these arrangements, Turkish Standards Institution published Turkish edition of ISO 15489, the international standard for records management (TS ISO 15489-1, 2007; TS ISO 15489-2, 2007). Another crucial study carried out in Turkey is Reference Model for System Criteria of Electronic Records Management (EBYSKRM) which was prepared in 2005 and whose revised second edition was published in 2006 (Kandur, 2006). Turkish Standards Institution adopted EBYSKRM as standard with the code of TSE 13298 on June 19, 2007 (Turkish Standards Institution). It is thought that TSE 13298 which was prepared compatible with the studies of ICA and Australian and British National Archieves, *MoReq* Model, DoD 5015.2 Standard, INTARPARES Project, ISO 15489 Standard, ANSI/ARMA Standards...etc. would be beneficial in conducting studies on records management in electronic environment in Turkey which are compatible and coordinated with international applications and standards (Külcü, 2009).

## **3. RESULTS OF THE QUESTIONNAIRE**

When the results yielded in Table 1 are examined, at university units, more than one third of all units except the Directorate of Construction and Technical Works and Library consider the slow communication flow as a problem. On the other hand, the related percentages of the Directorate of Construction and Technical Works and Library (28.3 and 30.2 %) are interestingly high. In all units where analyses are made according to results, archive stores are deemed as the second most problematic subject. Archive stores are seen as a problem in especially Registrar's Office, Directorate of Personnel Affairs and Administrative and Financial Affairs with higher percentages (23, 17.8, and 17.6 %) when compared to other units.

Table 1. The issues on organizational communication and records management

	Communicati	Disposition	Security	Duplication	Repositories	Access	Nothing	Total
<b>Personal Affairs</b>	91	12	9	18	46	14	68	258
<b>%</b>	35,2	4,7	3,6	7	17,8	5,4	26,3	100
<b>Computer Centers</b>	9	0	1	2	4	3	8	27
<b>%</b>	33,3	0	3,7	7,4	14,8	11,2	29,6	100
<b>Library and Document</b>	19	1	0	2	10	9	22	63
<b>%</b>	30,2	1,6	0	3,2	15,8	14,3	34,9	100
<b>Administr and Financ</b>	39	2	1	10	19	12	25	108
<b>%</b>	36,1	1,8	0,9	9,3	17,6	11,1	23,2	100
<b>Student Affairs</b>	59	14	8	11	40	11	27	170
<b>%</b>	34,7	8,2	4,7	6,5	23,5	6,5	15,9	100
<b>Constr. and Technical</b>	13	2	--	3	6	8	14	46
<b>%</b>	28,3	4,3	0	6,5	13	17,5	30,4	100
<b>General Records</b>	11	2	1	2	2	1	11	30
<b>%</b>	36,7	6,7	3,3	6,7	6,7	3,3	36,7	100
<b>Faculties, Vocational</b>	332	58	36	48	114	80	236	904
<b>%</b>	36,7	6,4	4	5,3	12,6	8,8	26,2	100
<b>Total</b>	573	91	56	96	241	138	411	1606
<b>%</b>	35,7	5,6	3,5	6	15	8,6	25,6	100

When the results in Table 2 where the reasons for the issues of institutional communication, information, records, and archive systems at university units are assessed, what meets the eye is that some differences have occurred between units concordant with their working areas. Within this framework, while the issues of institutional communication, information, records, and archive systems at all units except the Directorate of Computer

Centers are seen to be caused due to lack of in-service training, the issues of the Directorate of Computer Centers are mainly (45.5%) based on resource shortages. Besides, percentages (20% and above) depicting that the problems at units except Faculties, Vocational Schools and Institutes are caused because of staff recruitment are at a salient level.

Tablo 2. Where the reasons for the issues of organizations

	Re-construction	L L Personnel	L Education	Archive	Total
	<b>Resources</b>				
<b>Personal Affairs</b>	33	37	53	79	242
%	13,6	15,4	21,9	32,6	100
<b>Computer Centers</b>	3	10	1	3	22
%	13,6	45,5	4,5	13,6	100
<b>Library and Document</b>	10	8	11	18	55
%	18,3	14,5	20	32,7	100
<b>Administr and Financ</b>	11	14	15	37	96
%	11,5	14,6	15,6	38,5	100
<b>Student Affairs</b>	27	24	32	47	153
%	17,6	15,7	20,9	30,7	100
<b>Constr. and Technical</b>	10	6	11	14	47
%	21,3	12,8	23,4	29,7	100
<b>General Records</b>	3	7	2	10	31
%	9,7	22,6	6,4	32,3	100
<b>Faculties, Vocational</b>	115	135	137	284	784
%	14,7	17,2	17,5	36,2	100
<b>Total</b>	212	241	262	492	1430
%	14,9	16,8	18,3	34,4	100

In Table 3, the implementation of enterprise information services, where work processes of institutional information activities would be brought together in one platform, was studied to show in which areas among institutions it would primarily increase the efficiency. There is a balanced distribution among topics, where participants were able to circle more than one choice. However, it turns out that while Library (47.2 %) and Construction Works circled in-house communication and coordination, General Records (41.7 %), Information Technologies (39.1 %), Registrar's Office (37.8 %), Personnel Affairs (34.6 %), Faculties, etc. (32.7 %) circled easier and faster access to information more frequently when compared to other choices.

Table 3. Positive effects of the implementation of enterprise information services

		Communication	Access	Integrity	Personnel
<b>Personal Affairs</b>		54	71	49	31
	%	26,3	34,6	23,9	15,1
<b>Computer Centers</b>		2	9	9	3
	%	8,7	39,1	39,1	13,0
<b>Library and Documentation</b>		25	13	12	3
	%	47,2	24,5	22,6	5,7
<b>Administrative and Financial</b>		24	29	24	9
	%	27,9	33,7	27,9	10,5
<b>Student Affairs</b>		37	51	33	14
	%	27,4	37,8	24,4	10,4
<b>Construction and Technical</b>		13	10	7	2
	%	40,6	31,3	21,9	6,3
<b>General Records</b>		5	10	5	4
	%	20,8	41,7	20,8	16,7
<b>Faculties, Vocational Schools</b>		202	234	217	63
	%	28,2	32,7	30,3	8,8
<b>Total</b>		362	427	356	129
	%	28,4	33,5	27,9	10,2

It is interesting that the least preferred choice for all groups is the choice of decreasing work load of staff. Survey participants answered by substantially circling all 5 categories that are defined for the question about primarily in which working area enterprise information services would improve the institution. However, for all groups, general records activities are among topics that would be improved initially. General records activities are circled by groups with a percentage of 87 and above. For the ones who work at Personnel Affairs, the first area to be bettered is personnel affairs (90.1 %), and then immediately comes the area of general records activities (87.6 %). The Chi-square values of personnel affairs' answers verify that personnel affairs' answers differ significantly from other groups' answers. On the other hand, in the Library, there are great expectations (92.9 %) of improvement in personnel activities. The circling percentage of the staff of General Records and Construction Works units for the same topic is over 80 %. With the development in enterprise information systems, there is an over 80 % expectation of improvement among the Library staff in information technologies, and among the General Records staff in student affairs.

#### 4. CONCLUSION

At 22 analyzed universities, printed documents are predominantly used for

communication and official correspondence. The percentage of the universities which officially communicate through electronic environment is 15. The surveyed units are firstly complaining about slow communication processes. Archive stores which gradually face difficulties in meeting needs is another topic. The institution employees are substantially in need of in-service training in current document activities. In small units, there is a rising demand for educated personnel.

Most of the universities make use of the electronic environment for routine correspondence. The biggest problem is the transfer of all work processes to electronic environment.

Various information services in an institution to be integrated and to be restructured for enabling mutual data flow will make a major contribution towards expediting and activating work processes. Similar endeavors to improve enterprise systems should be repeated within a wider framework in international settings.

## 5. REFERENCES

- ARMA (Association of Records Managers and Administrators). (2008), available at: [www.arma.org/erecords/index.cfm](http://www.arma.org/erecords/index.cfm) (accessed 28 January 2006).
- Barata, Kimberly. (2004), "Archives in the digital age". *Journal of the Society of Archivists*, 25 (1): 63-70
- Baş, T. (2001). *Anket: anket nasıl hazırlanır, anket nasıl uygulanır, anket nasıl değerlendirilir?* Ankara: Seçkin
- Batley, Sue. (2007), "The I in information architecture: the challenge of content management". *Aslib Proceedings: New Information Perspectives*, 59 (2): 139-151
- Bilgi Edinme Hakkı Kanunu. (2003), *T.C.Resmi Gazete*, Sayı: 25269, 24 Ekim 2003: 8617).
- Blazic, Aleksej Jerman. (2007), "Long Term Trusted Archive Services". *Proceedings of the First International Conference on the Digital Society*, available at: <http://ieeexplore.ieee.org/iel5/4063752/4063753/04063790.pdf?arnumber=4063790>
- Duranti, L. (2001), "The impact of digital technology on archival science". *Archival Science*, 1 (1):39-55.
- Duranti, L. & Thibodeau, K. (2006), The concept of record in interactive, experiential and dynamic environments: the view of InterPARES, *Archival Science*, 6, 1, 13-68.
- Duranti, Luciana (2007). An Overview of InterPARES 3 (2007-2012). *Archives & Social Studies*, 1(1): 577-603.
- Elektronik İmza Kanunu. (2004), *T.C.Resmi Gazete*, Sayı: 25355, 23 Ocak 2004: 1-11
- Greenwood, D. J. & Levin, M. (2003). *Reconstructing the relationships between Universities and Society through action research*. London: SAGE.

- Hukuk Usulü Mahkemeleri Kanunu. (2004), “Madde 295/A- (Ek madde: 15/01/2004-5070 S.K./23.mad)”, available at: <http://www.mevzuat.adalet.gov.tr/html/435.html>
- International Organization for Standardization (ISO). (2001), *ISO 15489-1:2001 Information and documentation - Records management - Part 1: General*. Geneva: International Organization for Standardization.
- InterPARES Authenticity Task Force. (2002), “Requirements for assessing and maintaining the authenticity of electronic records. InterPARES, The long-term preservation of authentic electronic records: findings of the InterPARES project”. InterPARES, Vancouver, available at: [http://www.interpares.org/book/interpares\\_book\\_d\\_part1.pdf](http://www.interpares.org/book/interpares_book_d_part1.pdf). Consulted 2 August 2007
- InterPARES Project. (2008), “The International Research on Permanent Authentic Records in Electronic Systems (InterPARES) 3 Project”, available at: <http://www.interpares.org/>
- Kandur, H. (2006). Elektronik belge yönetimi sistem kriterleri referans modeli. Ankara: Devlet Arşivleri Genel Müdürlüğü.
- Kunis, R., Rüniger, G. and Schwind, M. (2007), “A model for document management in e-government systems based on hierarchical process folders”. *Electronic Journal of e-Government*, 5 (2): 191-204
- Külcü, Özgür. (2009). Evolution of the e-records management practices in e-government: reflections from Turkey. *The Electronic Library*, 27 (6), 999-1009
- Lee, S. M., Tan, X., and Trimi, S. (2005), “Current practices of leading e-government countries”. *Communications of the ACM*, 48 (10): 99-104
- McLeod, J., Hare, C. and Johare, R. (2004), “Education and training for records management in the electronic environment - the (re)search for an appropriate model”. *Information Research* 9 (3), available at: <http://informationr.net/ir/9-3/paper179.html>
- National Research Institute of Electronics and Cryptology. (2008), available at: <http://www.uekae.tubitak.gov.tr/home.do?ot=10&lang=en>
- Özdamar, K. (2004). *Paket programlar ile istatistiksel veri analizi 1 (Statistical data analysis with software packages)*. Eskişehir: Pegem.
- Rosenfeld, L. and Morville, Peter. (2002), *Information Architecture for World Wide Web*. Sebastopol: O'Reilly & Associates.
- TS 13298. (2009). *Elektronik belge yönetimi*. Bilgi Teknolojileri ve İletişim İhtisas Grubu Türk Standartları Enstitüsü, 29 Haziran 2009.
- TS ISO 15489-1. (2007). *Bilgi ve dokümantasyon- Belge yönetimi Bölüm 1: Genel*. Ankara: Türk Standartları Enstitüsü.
- TS ISO/TR 15489-2. (2007). *Bilgi ve dokümantasyon- Belge yönetimi Bölüm 2: Genel*. Ankara: Türk Standartları Enstitüsü.
- Yazıcıoğlu, Y. & Erdoğan, S. (2004). *SPSS uygulamalı bilimsel araştırma yöntemleri (Research methods with SPSS practices)*. Ankara: Detay Yayıncılık.

