

12 “E-Government Principles and Implementation of these in a Higher Education Institute in Greece”

Prof. Dr. Dimitriou TSELES

Deputy Rector of Piraeus University of Applied Sciences, Greece

M. Sigala PhD candidate of National Kapodistrian University of Athens, Greece

12.1 Abstract:

A general description of the e-government system of the Public domain in Greece is presented in this paper in brief. An analysis on the progress of e-government principles applications in Piraeus University of Applied Sciences gives us details about services that any student could get from the MIS of the Institute. Results about the satisfaction of the students concerning overall educational aspects, ensure that the system's implementation attracts them to give a positive feedback or to participate more efficiently.

12.2 Key words:

education, e-government, e-services, ECTS, ENQA

12.3 Introduction

The EU organization declares that e-government is the use of information technologies and communication in Public Management in combination with the appropriate changes and abilities of personnel, in purpose of better services to the public, the encouragement of democracy and the support of public data. In the education area e-government constitutes of all the appropriate taken actions in order for all the educational institutes to have a strategic management with declared points and standards of quality for their curriculum and their degrees.

12.4 E-Gov in Greece

In Greece e-government has a delay on implementations of 72% of the digital scoreboards 2012. This fact shows that we have low grades in implementation of e-payments, e-exchanges, e-procurements, and broadband although the fact that we have succeeded the high level for the 7 of the 20 e-services, which are declared from EU as model of implementation of E-government principles.

Currently, in Europe we can observe a transformation of a citizen's needs and satisfactions. As a result of this we have an entrepreneurial governance where citizens are transformed into clients and the Public sector and especially the citizen becomes a businessman of himself, who cares about the cost / benefit and the value of money in relation with measurable and realistic targets. This trends to

promote responsibility of citizen who declares that keep citizen rights and obligations in society .

The six dimensions of Governance , which Greece has to implement to its Public Management, as the other EU countries have already done, are

- Voice and Accountability of the citizens
- Political Stability and Absence of Violence
- Government Effectiveness
- Regulatory Quality
- Rule of Law
- Control of Corruption

In the following chart we see the level of e-government implementation of some European model services in Greece.

Services for citizens	% of e-government services	Authority
Vat and tax services	100%	Taxis Office (Ministry of Economy)
Finding a job	100%	Ministry of Labor
Insurance services (e.g. unemployment allowance)	45%	Ministry of Labor
Passport and driving license	50%	Greek Police
Building Permit	50%	Environment Ministry and Urban Offices
Public libraries	80%	Ministry of education
Birth certification and certification of the event of life (such as death, birth, residence change)	75%	KEP
Change of residence	100%	KEP
Health services (appointment with doctors, prescriptions)	50%	Ministry of Health

Services for enterprises	% of e-government services	Authority
Insurance services	100%	Ministry of Labor
Vat and tax services	100%	Taxis Office (Ministry of Economy)
Public Procurements	50%	Trade Department
Business Start up	50%	Trade Department
Environmental Permit	40%	Environment Ministry and Urban Offices

According to the latest research of European Commission e-Government performance across policy priorities in Greece comparing to average of the other European countries is as follow:

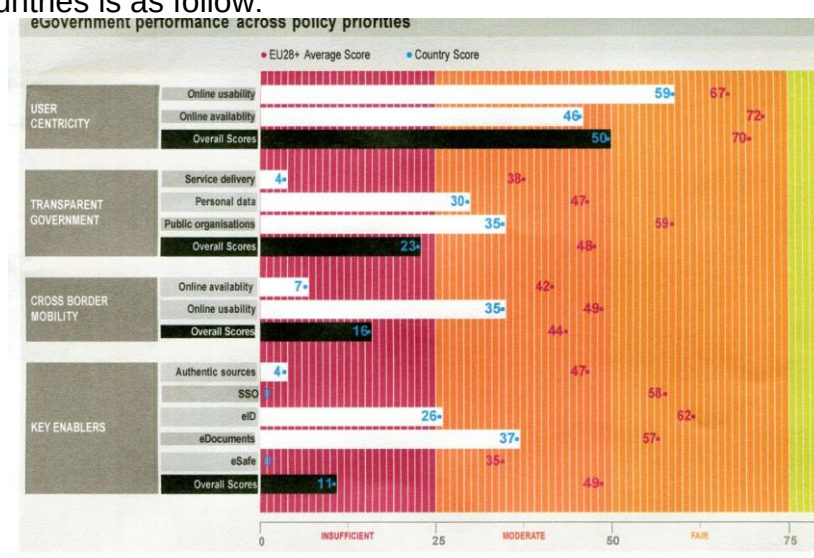
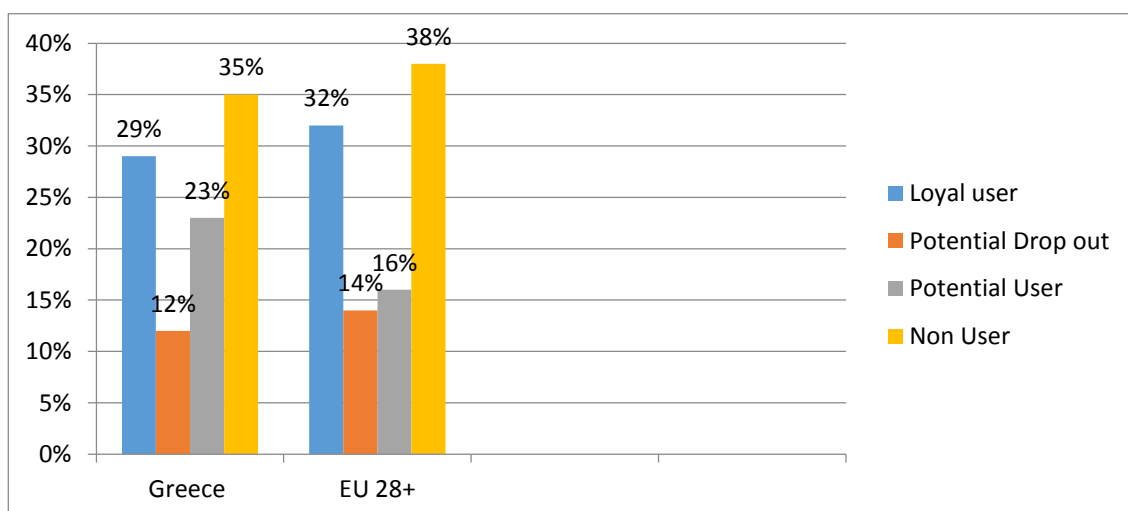


Figure 1. E-Government Performance across policy priorities

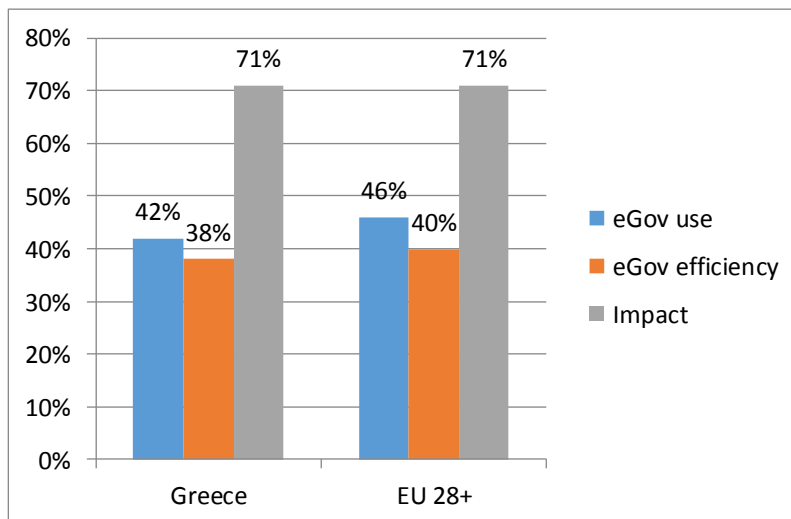
- The user centricity indicates to what extent (information about) a service is provided online and how this is perceived by the citizen so, includes the online usability and the online availability.
- The transparent government evaluates the transparency of Government authorities' operations and service delivery procedures and the accessibility of personal data to users. This indicator includes: transparency of service delivery, transparency of personal data and of public organizations which mean, controlled assesses of whom and which public organizations manage the citizens' e-file.
- The cross border mobility which includes the online availability and the usability. Online availability and usability determine to what extent information and services are fully online, with the relevant feedback available.
- The key enablers includes the authentic sources which are base registries used by Public authorities in order to automatically validate or fetch data relating to citizens or businesses, the single sign on (SSO): which is a functionality that allows users to get access to multiple websites without the need to re log in multiple times, the electronic identification (e-ID), is an electronic identification which declares if the user is who he claims to be, the electronic documents, which includes all the document which are used, delivered and sent by Internet and the electronic safe (e Safe): which is a virtual secure repository for storing, administering and sharing personal electronic data and documents.

Figure 2. About the E-Government Users according to the latest EU research (2014)



The benchmark of Effective Government indicates the extent to which government succeed in satisfying their online users and achieve re-use and fulfilled expectations and includes the indicators e-Gov use.

Figure 3. Effective Government



So, total we have :
Completion rate of e-Government services

% Completion rate of e-Government services	Greece (2010)	Average of EU 27 (2010)
Services for citizens	65%	87%
Services for enterprises	78%	94%
Total of existing 20 model e-services	70%	90%
Indicators of Fully e- accessibility	48%	82%

Since 2012, there have been many efforts in order to be raised these percentages of e-government services, to increase the citizen satisfaction and to minimize bureaucracy, delays and disorders in Public sector.

Greek Public Management is trying to adopt the use of information technologies in it's services. The operation of ERMIS portal in where the citizen could make the basic exchanges with public authorities through internet as long as they have been identified by the authorities, for using this services, the implementation of diaygeia project, which includes the transparency of any administrative or financial public decision, the taxis net services, are some significant actions, which are implemented by the Greek authorities for the e-government plan in Greece.

The issues that has to be enforced and encouraged by the next era 2014-2020 are the accessibility of all citizen especially for the vulnerable groups, the interoperability of all data systems for the public sector, the open data, the simplicity of administrative procedures, are some action which have targeted in reducing of cost and time for those procedures and reducing of beaurocracy. One significant area in which the Government in Greece has to be focused is the creation of the unique citizen data

entry points in order to be one reference point for all public sector and for everyone to be able to access the data, with the appropriate security and transparency as Eu laws declares, a long term strategic plan for information technologies implementation in public sector. Also simplifying the regulatory and institutional framework is important, so that citizens and the markets feel that Greece is a safe and valid environment for business and life also.

12.5 E-Gov in Education

Order to Greece to make implementation of new management models and the Target Models also, in higher education, as it tries to happen in Public Administration in Greece, will be made:

- Recording cost
- Recording objectives and strategic planning of each department and institution under at least five years
- Recording processes occurring both at administrative and educational level
- Measurement of effectiveness - efficiency, ie. Internal assessment - self-assessment and evaluation, with continuous improvement movements and measurements.
- These parameters should be considered and done through internal and external evaluations of departments and institutions in general, actions which are also provided, law enforcement databases and international quality frameworks such as the organization ENQA, the principle of quality assurance in educational institutions and implemented through the Quality Assurance Agency in Education in Greece (ADIP authority in Greece). ADIP is an umbrella independent organization in Greece which is responsible for the quality assurance in education institution in higher education.

“The European Credit Transfer and Accumulation System (ECTS) is a tool that helps to design, describe, and deliver study programmes and award higher education qualifications. The use of ECTS, in conjunction with outcomes-based qualifications frameworks, makes study programmes and qualifications more transparent and facilitates the recognition of qualifications.” The European Credit Transfer System (ECTS), which is already applied in many European higher education institutions is a useful credit granting and transfer tool, which was originally developed and experimentally been applied widely in the Member States of the European Community, from 1992 to 1993 and we can say that is an element of e-government in education, since it contributes to facilitating academic recognition processes between the collaborating institutions in Europe through the use of real and generally applicable mechanisms. ECTS hides an organized management system, continuous self-assessment and evaluation of the education system, competitive and comparable to encourage mobility of students, and staff of institutions, since it requires constant vigilance and reform, both the educational process, but also offered services, infrastructure, personnel, etc. Our institution implements ECTS with success since 2011.

We could declare that the European Credit Transfer System (ECTS), is a system of e-governance of higher education institutions, since it provides a code of good practice for optimizing the organization of academic recognition and enhances transparency, comparability and equal weight between the respective object of study programs in European countries and raises the need for a single European

Qualifications Framework. But how the e-government brought changes in higher education in Greece;

12.6 Case Study: PUAS

The case study applied in PUAS has given some distinctive results but let present our Institute.

Synopsis of the profile of PUAS

Piraeus University of Applied Sciences (Technological Education Institute of Piraeus) is an independent and self-governed Institute of higher education. The operation of the Institute is based on the Greek laws 4009/2011, 4076/2012, 3549/2007, 2916/2001. The degrees offered are recognized by the Greek state and EU and are fully evaluated. The studies in the Departments of Piraeus University of Applied Sciences (Technological Education Institute of Piraeus) for the first level degrees are lasting four years typically and are equivalent to 240 ECTS, according to the Bologna Process Guidelines.

After graduation, the new scientists may continue their studies in the second level (MSc) programs that last one to two years weighted 90-120 ECTS. Then, a third level course is possible for PhD studies in collaboration with several Universities in Greece or in European region.

The campus is extended on an area of about 100.000 m² in the middle of an olive grove, which includes some of the very same olive trees that used to shade Plato's Academy. The campus is near the center of Athens and the port of Piraeus and includes several buildings with the equivalent of 50.000 m² space. Among them the Conference Center and the library are encountered. There are facilities that cover all students' needs and support academic activities.

Nine (9) Departments exist in Piraeus University of Applied Sciences (Technological Education Institute of Piraeus) , grouped in two schools:

12.6.1 Engineering School:

- Automation Engineering Department
- Civil Engineering Department
- Computer Systems Engineering Department
- Electrical Engineering Department
- Electronic Engineering Department
- Mechanical Engineering Department
- Textile Engineering Department

12.6.2 School of Business and Economics:

- Accounting and Finance Department
- Business and Administration Department

PUAS has awarded a DS label for the system of Higher Education alignment procedures. There are also about (19) Postgraduate Programs at the second level (Master). Some of them are autonomous and are governed by the TEI of Piraeus

rules. There are also programs that are organized in collaboration with several Universities in the European area and the United States.

Educational institutions in Greece, often focus only on the purely educational function, regardless of the other services offered to the students themselves, having the excuse especially in Greece, that the Central Government as long as the education in Greece is a free privilege, is responsible for the targeted institutions and the wider course are provided the finances and decide that for most of their actions, but this is not entirely correct, since it is simultaneously self-administered and some actions may be performed by them.

The Information System of PUAS is based on ERP Guidelines.
Figure 5. ERP Guidelines implemented in PUAS



Our Information Technology System includes the following subsystems:

- Data Management undergraduate and Graduate studies and curriculum
- Internet via student services
- Service Teachers online
- Report Manager
- Management Statistics
- Student Services for the Food and Care services
- Data Management academic and administrative personnel
- Data Management Procurement and Supplies
- Download Documents from external file
- Data Management of Business register for training and employment of our students

Also in our next step will be:

- the creation of a data base for the research activity for all academic personnel,
- the Textbooks management and Scheduling Galleries through IT

The Research and Development Department which has annual budget about 2 million Euros manages all the EU and non EU programmes and has a separated Information System reScom, which offers an integrated project management of all research project (timesheets, economic managements, management of work packages, etc).

In the following chart we can see the comparative data for the provided services for students before 2009 and after 2009 in PUAS:

Figure 6. Provided Services for students in PUAS before 2009 and after 2009

Administrative support of the department in our Institute	Before 2009	After 2009
Students registration (not for the new ones)	100% physical presence	100% electronically with the use of unique password for each students
Various applications (as for marks, etc)	physical presence 90% through one stop shop KEP 5% phone services through KEP (1502) 5%	physical presence 30 % through one stop shop 10 % E-MAIL 10% e services 50%
Administrative procedures and communication with other parties	physical presence	E-MAIL : 55% FAX:25% physical presence: 20%
Diploma and calculation of the score	manual	e-system 95% manual 5% (old students)
Student card	manual	e-systems with the collaboration of institute, ministry of education and private party who has this authority

So, we realize that e-government in the higher education institutions, enables the simplification and transparency of procedures, such as recording the scores and the degree grade calculation, in order to directly serve the student with quality and safety (limiting fraud in assessment process), but also affects the educational process itself, with introduction of open academic courses, with the existence of e- course and e-lectures provide (with e-additional information materials and simulations for the laboratories courses and the existence of an ambient cloud (cloud) for each course) but also encourages the existing of platform for sharing of ideas and techniques between the involved parties overcoming distance and accessibility. Furthermore, social media already become prominent in educational procedures initially by the students themselves, as a means of communication and exchange of views, but may be used by the institutions themselves for hanging emergency communications, etc. The objective of open academic courses, is the completion of the project to provide as many courses online, the corresponding digital material available with creative commons licenses both stakeholders (students, students) and the general public through asynchronous learning platform but generally available material through

video-conferences or general multimedia podcast type material and other interactive educational materials that will help to encourage the student to learning through creative learning channels.

At our institution, here is how they are applied;

Regarding the educational process and the services available to students:

In recent years we have implemented ECTS system since 2011 in full, which facilitates the movement or transfer of credits for students in other European countries and the implementation of a quality system record of ongoing procedures, questionnaires to students who respond to the provided services and process them with a view to continuous improvement and monitoring of performance indicators and the educational process.

Also, e- secretariat services have been implemented so many services provided to students are made electronically through identification of students. These services are offered to all existing students rather than to newcomers required in the first stage of their physical presence with the documents required for enrollment in section and receipt codes for electronic services through the information system. Then the scores, statements that may be needed by students from the department, is something provided electronically through the information system and greatly reduce the service time student, ensure transparency of the process and reduce costs, since fewer required people in physical presence to serve the students in person.

Already implemented at our institution the "Open Academic Courses", through the platform moodle, with the aim of strengthening and time to multiply, so some courses in all departments, can be fully electronically offered. Through the program of Open Academic Course, provided knowledge and given aid and Professors and students to have access to the communication platform and develop digital lectures, digital tutorial material for students who need it, etc., thus reducing the cost of education and the notes or educational books too.

12.7 Conclusion

In conclusion, we can say that in Greece despite the economic crisis, we are encouraged to implement e-government of public services, while in the area of public administration as well as in education, but we should note that higher education institutions in Greece have no other financial resources outside of state funding, leading to absolute dependence on it, in terms of both their staff and the services provided to students, so this fact makes all the effort more complicated.

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