Analysis of IT in Spanish Universities

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How we are organized

CRUE TIC Comisión Sectorial de las Tecnologías de la Información y las Comunicaciones
>120 members

IT Analysing, Planning and Governance Group (ITAPGG)
12 members

gti4u Team Researchers
10 members

UNIVERSITIC 9 years
What is UNIVERSITIC?

It is the name of...

- An annual Survey, which results are published in a report bearing also the same name.

- A catalogue of IT indicators, which includes 3 different kind of indicators: description, management and governance.

- A knowledgebase, which includes values from 9 survey editions.
UNIVERSITIC is a catalogue

Divided into 3 tiers...

IT Governance

IT Management

IT Description

An integral vision of IT in a HEI !!!
1. Teaching and Learning
2. Research
3. Management Processes
4. Information Management
5. IT Training and Culture
1. IT Resources
2. IT Projects
3. IT Services
4. IT Management
5. IT Quality, Regulations and Standards
6. Collaborations
1. Responsibility
2. Strategy
3. Acquisition
4. Performance
5. Conformance
6. Human Behaviour

IT Governance Principles (ISO 38500)
Principles: 6
Objectives: 30
Variables: 128
Indicators: -

Axes: 7
Objectives: 21
Variables: 142
Indicators: 26

Axes: 5
Objectives: 15
Variables: 71
Indicators: 26
UNIVERSITIC is a survey...

- Designed by and for IT Directors
- Includes cost and volume indicators but most of them are best practices indicators
- We put our focus on Services and IT Management
EFFICIENCY
Getting the most out of the available resources

64 universities
1,337,167 students
90% of university students
102,520 faculty (academic staff)
51,239 administration and services staff

Yearly Tertiary Education Enrollment and Graduations (2006 to 2015)
3.62% average budget allocated to IT by universities

220,000,000 euros devoted to centralised IT

50% non-staff costs
- 28% new investments
- 15% hardware maintenance
- 21% software maintenance
- 36% outsourced services

50% staff costs
- 2,953 permanent staff (FTE)
- 437 temporary staff
- 719 IT specialists in other services
- 721 outsourced

4,830 specialists in central services
IT manager’s time distribution

- **26%** on designing and planning strategies
- **26%** on designing projects and supervising management
- **25%** on user assistance and resolving incidents
- **23%** on other matters (training, supplier assistance, etc.)
SERVICE
Providing students, teachers and managers with the equipment and services they need to work under the best conditions

183,000
computers available to students (computer rooms, open-access computer rooms and laptops)

440,000,000
wi-fi connections per year

9 million x university x year

Complemented by the students' own personal equipment (BYOD), which also require services (wi-fi network, programs, etc.)
IT services

- 4 IT-supported research: 66%
- 7 IT-supported teaching: 85%
- 64 IT-supported management: 73%
- 5 identity management: 84%
- 11 web and digital content publication: 78%
- 7 communication services: 85%
- 7 workstation assistance: 93%
- 13 collaborative working and mail tools: 69%
Provision of services

- 26% SLA
- 12% cloud
- 19% open source

Typical elements of electronic administration

% of universities that have implemented or are developing them

- electronic signature: 84%
- payment gateway: 82%
- document management system: 80%
- public procurement: 75%
- processing manager: 73%
- electronic register: 72%
- virtual office: 71%
- signatures folder: 68%
- time stamping: 68%
- electronic seals: 68%
- agreed keys: 58%
- noticeboard: 58%
- electronic archive: 57%
- citizen folder: 56%
- electronic notification: 56%
- electronic communication: 54%
- authentic copying: 39%
- official gazette: 38%
- certified digitalisation: 29%
TRANSFORMATION
A new university thanks to IT

26,411 classrooms

- Basic: 66.32%
- Advanced T1: 8.98%
- Advanced T2: 3.65%
- Advanced T3: 1.68%
- Without IT equipment: 19.37%

Internet connection
multimedia projector
digital board
content recording and/or real time streaming
local network connected to the digital board
21 good practices in elearning

9 implemented in all universities:
- education technologies (forums, chats, calendars, etc.) 100%
- specialists 100%
- elearning unit 100%
- initiatives for elearning curricular subjects 100%
- initiatives for elearning extracurricular subjects 100%
- specific training plan for teaching staff 100%
- production of multimedia content 100%
- sharing elearning courses or subjects 100%
- specific elearning congresses 100%

12 % of universities offering or developing them:
- content adapted for mobile devices 97%
- multimedia digital repository 92%
- recording rooms 90%
- digital rights policy 82%
- training for staff specialising in elearning 70%
- specific training plan for students 69%
- content quality criteria 67%
- lecturers' networks 60%
- incentives for lecturers 54%
- training for companies 48%
- university radio station 44%
- university television station 43%
TRANSPARENCY
Accountability to society, easy access to information and publicity for governance actions

Transparency Portal
45% of universities

Open data initiative (RISP)
(reuse of public sector information)
11% of universities

80% university websites reach a recommended level of accessibility for public authorities (AA or AAA)
87% have an institutional content repository

Communication with the public
- 8 channels considered
- 5 channels used (on average)

- distribution lists: 98%
- publication on social networks: 95%
- corporate diary: 90%
- dealing with queries on social networks: 75%
- intranet notifications: 71%
- CRM software: 44%
- use of social networks as CRM: 32%
- online chat: 23%
have published the procedure for assessing and prioritising IT projects or annually design their IT project portfolio

50%

have a decision-making circuit for preparing IT initiatives

88%

have information and training processes so users can actively participate and understand the change the new projects involve

88%

governing teams have updated information on the state of IT

96%
IT Governance Best Practices...

- Responsibility: SI 31%, NO 69%
- Strategy: SI 31%, NO 69%
- Acquisition: SI 28%, NO 72%
- Performance: SI 29%, NO 71%
- Conformance: SI 18%, NO 82%
- Human Behaviour: SI 21%, NO 79%
UNIVERSITIC

since 2006

CRUE Universidades Españolas TIC

www.crue.org

GTI4U Investigamos en Gobierno de las TI We research in IT Governance

www.gt4u.es

working with international surveys

Latam & HE IT Benchmarking in Europe
Latam

- Two Editions of *UNIVERSITIC Latam*
- 15 HEIs have participated in 2013 and 42 in 2014.

- Last year, only one IT Governance project was implemented (CONFACAUCA University – Colombia).
PROPOSAL: a new European IT indicators catalog...

- Which includes the main common IT indicators from our national surveys

- Each national system could keep their own surveys and feed the common system with the needed values

- Publish a final report with European results
HE IT Benchmarking in Europe

UNIVERSITIC as a source for trans-national benchmarking

- A small subset of real UNIVERSITIC’s indicators has been selected for use or adoption in trans-national benchmarking.

- As a first step, this subset of indicators has been extracted in order to show the possible results of using the model proposed.

- This is only an example, data have been anonymized and some of the indicators have been estimated as its meaning differs slightly between UNIVERSITIC and the trans-national model.
## Context indicators

<table>
<thead>
<tr>
<th></th>
<th>Total staff</th>
<th>Number of students in official courses.</th>
<th>University's total budget.</th>
<th>Completed ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NPDI+NPAS</strong></td>
<td>2.721</td>
<td>24.177</td>
<td>169.384.164 €</td>
<td>19.522</td>
</tr>
<tr>
<td><strong>NESTUDIANTES</strong></td>
<td>218</td>
<td>244</td>
<td>9.686.564 €</td>
<td>1.590</td>
</tr>
<tr>
<td><strong>PRESUPUESTOTAL</strong></td>
<td>10.024</td>
<td>170.682</td>
<td>518.120.000 €</td>
<td>73.040</td>
</tr>
<tr>
<td><strong>NASIGNATURAS*5</strong></td>
<td>52</td>
<td>52</td>
<td>47</td>
<td>51</td>
</tr>
</tbody>
</table>

**Universities answering**

<table>
<thead>
<tr>
<th></th>
<th>NPDINPAS</th>
<th>NESTUDIANTES</th>
<th>PRESUPUESTOTAL</th>
<th>NASIGNATURAS*5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>52</strong></td>
<td><strong>52</strong></td>
<td><strong>47</strong></td>
<td><strong>51</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>
## IT resources and management indicators

<table>
<thead>
<tr>
<th></th>
<th>NTECNICOSTICC</th>
<th>NPRESEUTI</th>
<th>PPRESUTOTALTI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AVERAGE</strong></td>
<td>50</td>
<td>2,559,950 €</td>
<td>5,058,680 €</td>
</tr>
<tr>
<td><strong>MINIMUM</strong></td>
<td>4</td>
<td>118,193 €</td>
<td>317,292 €</td>
</tr>
<tr>
<td><strong>MAXIMUM</strong></td>
<td>163</td>
<td>12,029,210 €</td>
<td>19,400,000 €</td>
</tr>
<tr>
<td><strong>UNIVERSITIES ANSWERING</strong></td>
<td>61</td>
<td>46</td>
<td>42</td>
</tr>
</tbody>
</table>
### CIO on the Board

CIO on the governing board

<table>
<thead>
<tr>
<th>Universities Answering</th>
<th>BEGRESTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
</tr>
<tr>
<td>No</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>56</strong></td>
</tr>
</tbody>
</table>
## Examples of data analysis I

<table>
<thead>
<tr>
<th></th>
<th>IT staff vs Total staff</th>
<th>IT budget vs Total budget</th>
<th>IT staff vs IT budget (€ per IT person)</th>
<th>IT staff vs Number of students (students per IT person)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AVERAGE</strong></td>
<td>2.07%</td>
<td>3.44%</td>
<td>98.900 €</td>
<td>456</td>
</tr>
<tr>
<td><strong>MINIMUM</strong></td>
<td>0.48%</td>
<td>0.88%</td>
<td>22.932 €</td>
<td>61</td>
</tr>
<tr>
<td><strong>MAXIMUM</strong></td>
<td>5.30%</td>
<td>10.19%</td>
<td>230.952 €</td>
<td>1575</td>
</tr>
<tr>
<td><strong>VALID DATA</strong></td>
<td>61</td>
<td>42</td>
<td>42 €</td>
<td>61</td>
</tr>
</tbody>
</table>
Examples of data analysis II

<table>
<thead>
<tr>
<th>CIO in the governing board</th>
<th>IT staff vs Total staff</th>
<th>IT budget vs Total budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>1.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>MINIMUM</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>5.3%</td>
<td></td>
</tr>
<tr>
<td>VALID DATA</td>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>
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Thanks