

HOW ICT HAVE IMPACT AT ACADEMIC LIBRARIES PERFORMANCE

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INTRODUCTION

Information and Communication Technologies (ICT) are today essential: strong impact on life in society, on the economy and on business competitiveness.

Academic libraries play a decisive role in the dissemination of knowledge and should reinforce users' information literacy skills. The 21st century changed the traditional library and ICT help transformation (figure 1).

RESEARCH QUESTIONS

- How is the use of ICT evolving in Portugal?
- Are we making good use of them and taking advantage of their potential?
- How do educational institutions deal with ICT?

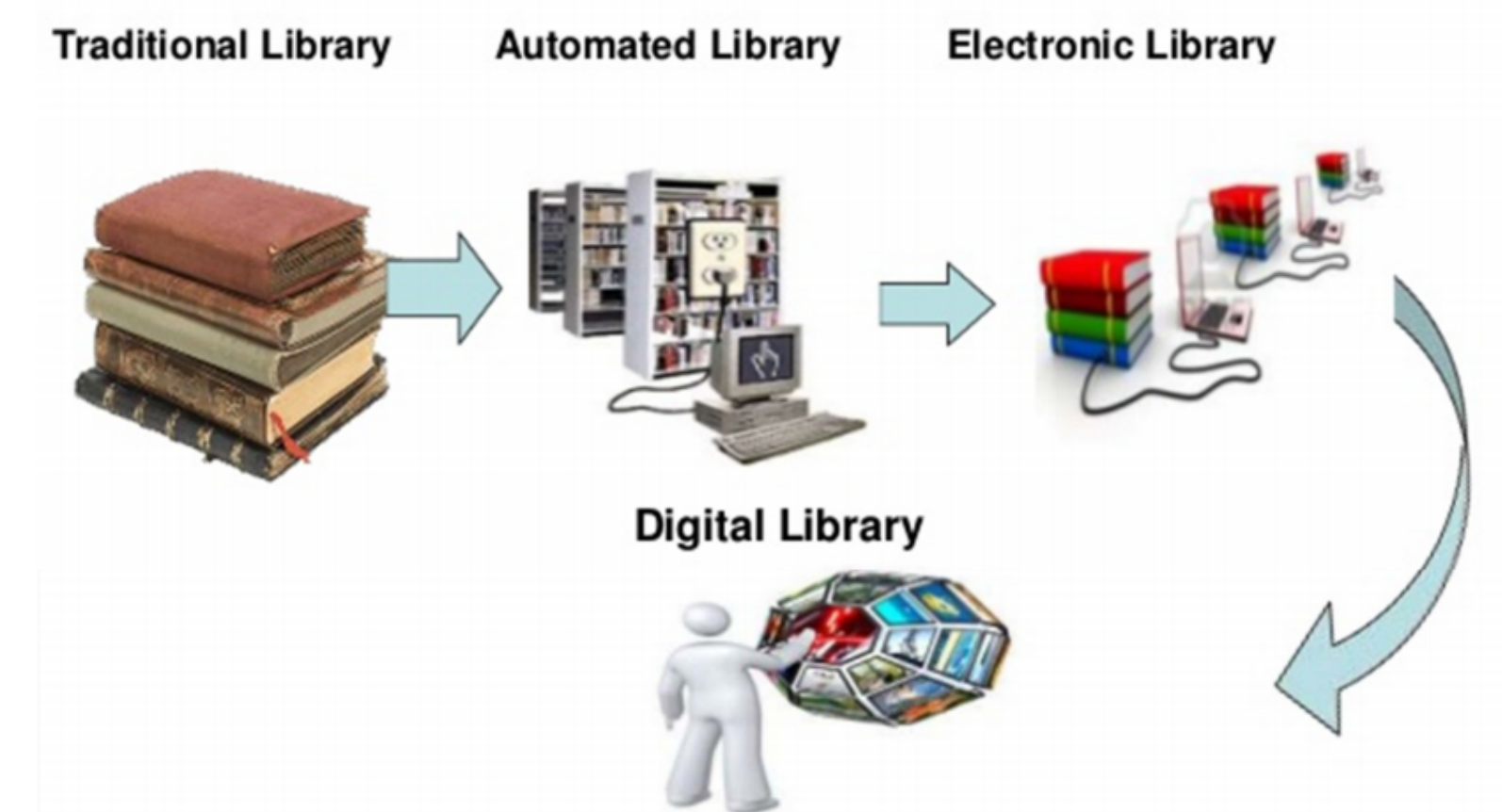
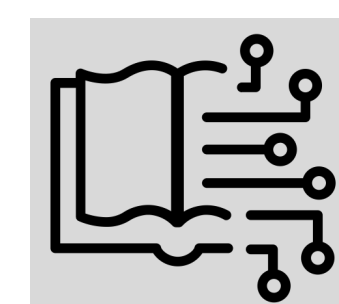


Figure 1: From traditional library to digital library
Source: (IISERPUNE, 2017)
<http://www.iiserpune.ac.in/~library/life2017>



Good practice of digitizing printed educational resources

Library of the Faculty of Economics of the University of Porto (Covid-19 pandemic)

- scanning on teacher request (77 requests)
- availability on closed platform supported by legal opinion
- school community access

From April to November over 11000 views, over 52 views/day (including vacation)

METHODS

- **Bibliographic research:** compilation and analysis of theoretical contributions
- **Statistical data analysis:** INE - Instituto Nacional de Estatística; FCT - Fundação para a Ciência e a Tecnologia; EUROSTAT - Statistical Office of the European Union

RESULTS AND DISCUSSIONS



Vaughan (2017) noted the computing environment has grown in positive ways, it evolved at communication and large quantities of online information.

Concerning the digital progress, since 2014, Portugal ranks 19th out of the 28 EU Member States according to European Commission (figure 2)

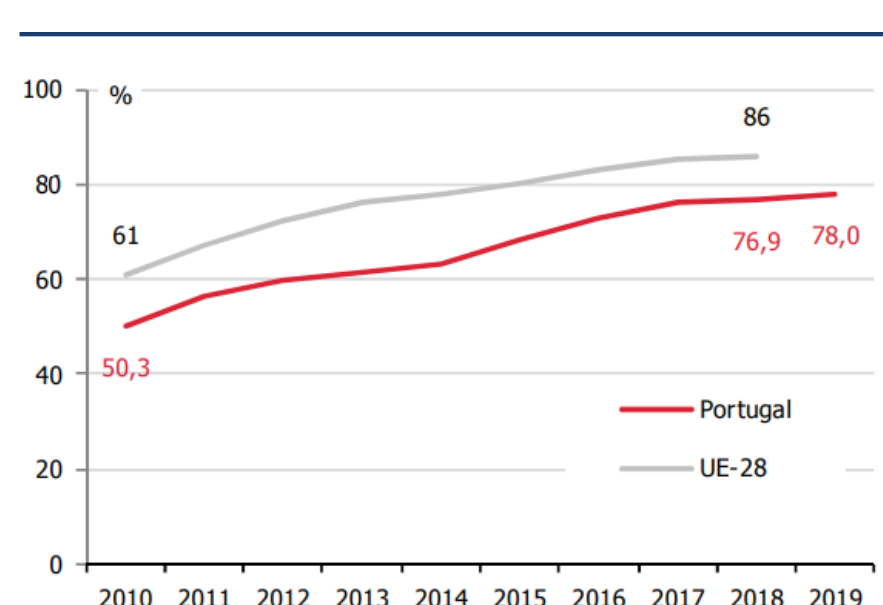


Figure3: Proportion of households with connection to the internet through broadband at home (Source: INE, 2019)

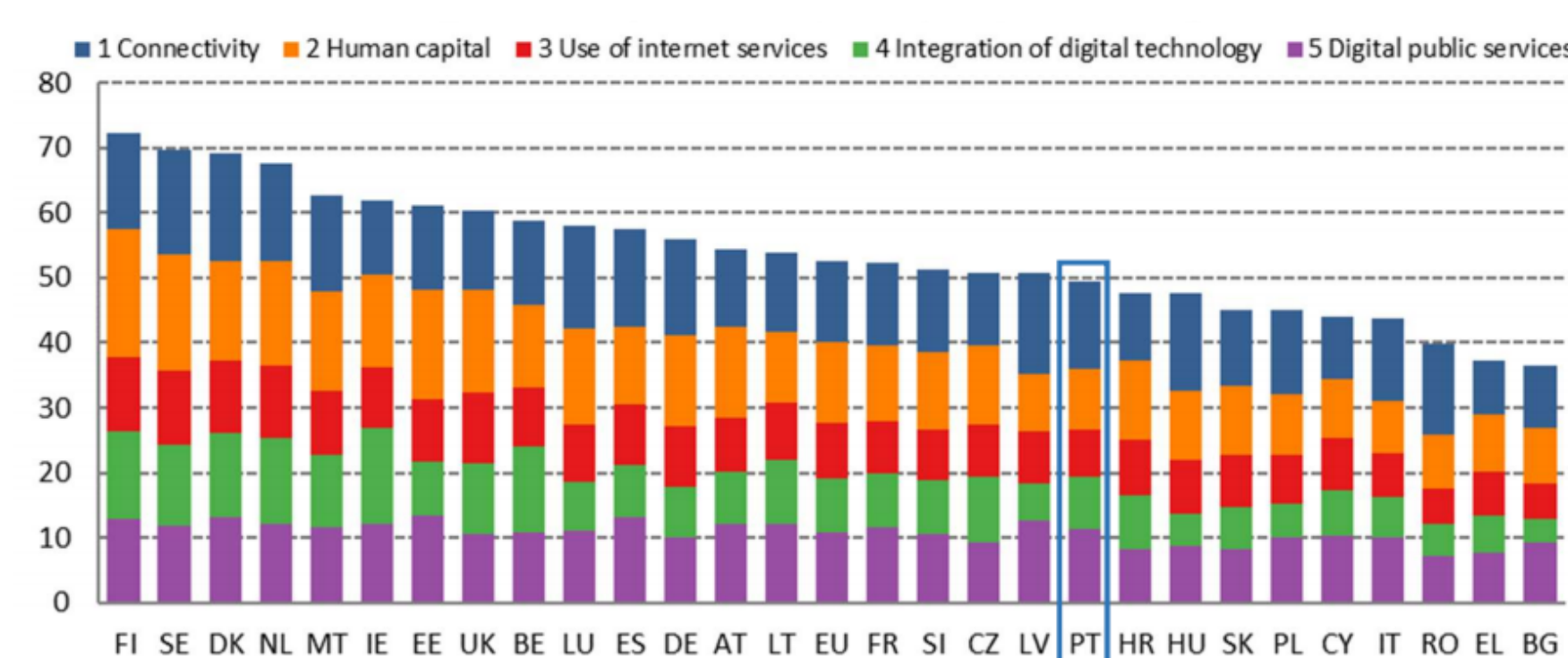


Figure 2: Digital Economy and Society Index (DESI) 2020 ranking
Source: (DESI Portugal, 2020)
<https://ec.europa.eu/digital-economy-and-society-index-desi-2020>

Number of people active in science and technology has been increasing in Portugal, being in 2019, 38.3% and reducing distance to EU-28 (figure 4).

	2010	2019
EU - 28	40,8	48,5
Portugal	23,9	38,3
Difference (%)	16,9	10,2

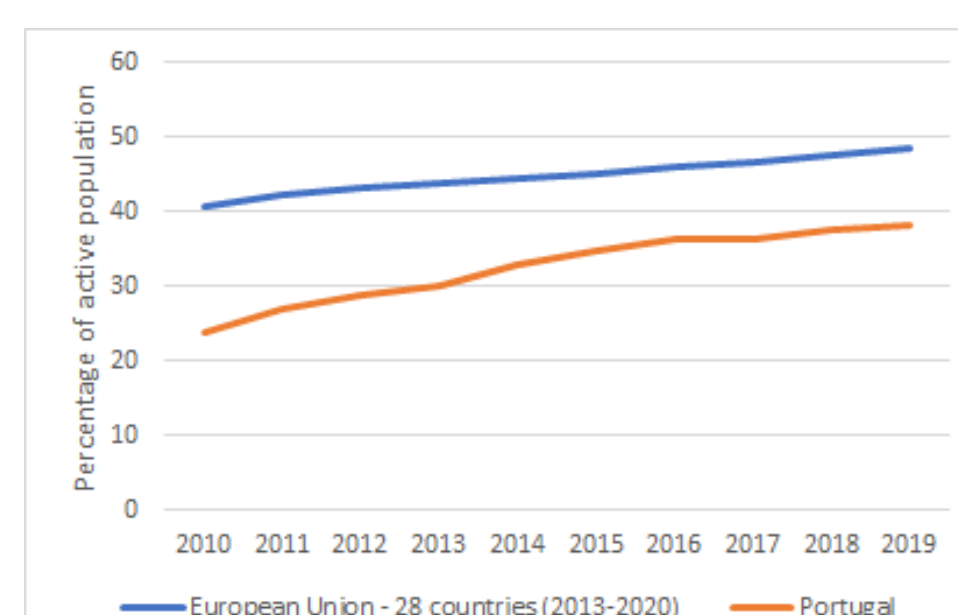


Figure4: Human resources in science and technology (HRST) active population in the age group 25-64 (Source: EUROSTAT, 2020)

In Portugal households with access to the Internet have increase but are still lower than that recorded in EU-28 (figure 3).



Vaughan (2017) noted university and library computing resources receive constant and growing use for research, disseminating and synthesizing at libraries information, on the other hand, Dhanavandan & Tamizhchelvan (2014) state the 21st century changed the traditional library professionals into modern by way of using ICT at the library.

The number of downloads at B-on - Online Knowledge Library - shows an increasing trend of access to digital publications, by students and researchers of Higher Education, after a slight decrease in 2016 (figure 5).

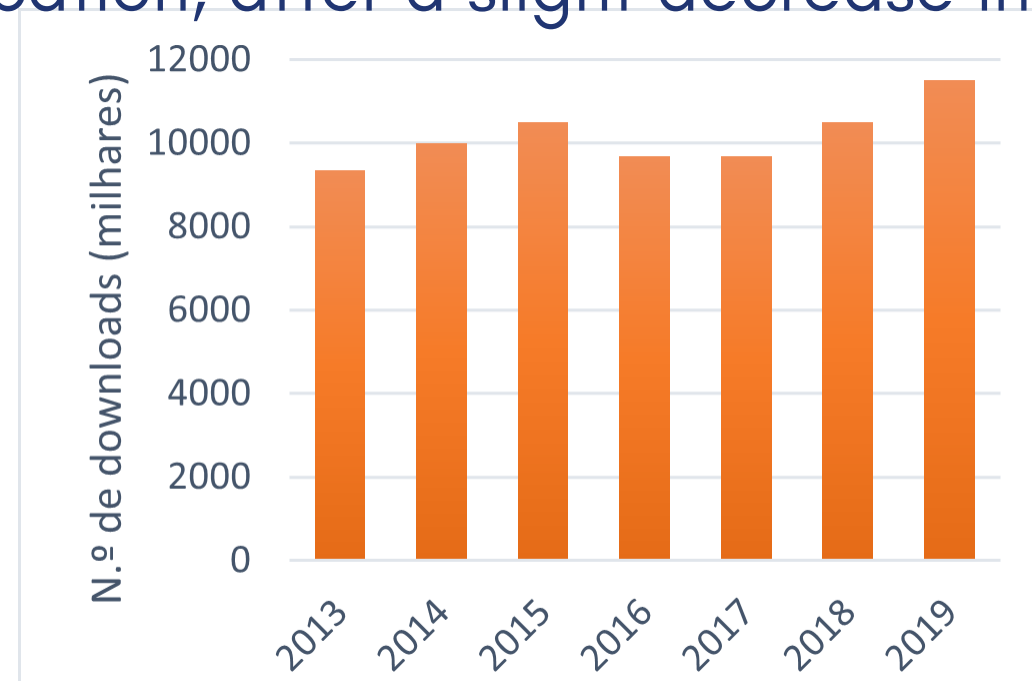


Figure5: B-On downloads (Source: FCCN, 2020)

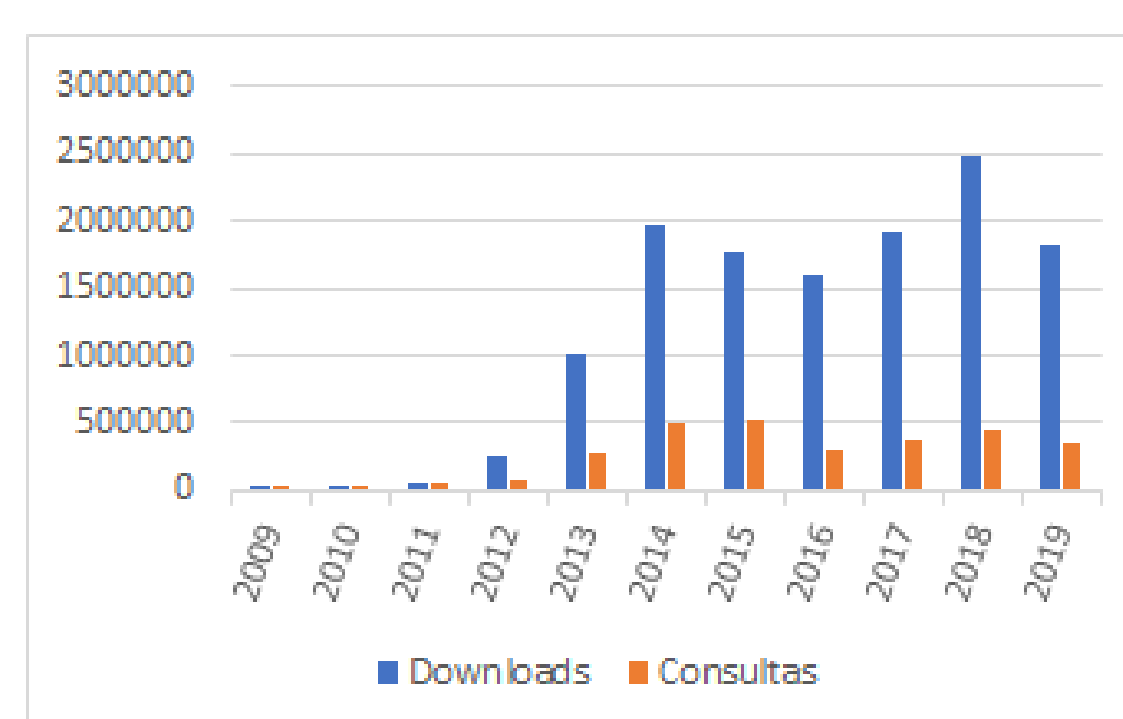


Figure6: Total number of downloads and queries at RCAAP (Source: FCT, 2020)

Strong growth of RCAAP (*Repositórios Científicos de Acesso Aberto de Portugal*) which aggregates the scientific production of Portugal, due to the high number of downloads (figure 6)

Eduroam research and education networking mobility service is highly representative in Portugal, and its use continues to expand.



CONCLUSIONS



ICT IN PORTUGAL

- ✓ The use of ICT in Portugal has been on a growing trend.
- ✓ Although progress has been made in terms of digital transformation, Portugal has to make an effort to improve, in terms of European ranking.
- ✓ In Higher Education, we observe that national support initiatives and programs are of great importance, with continued, persistent and monitored investment being crucial.



HIGHER EDUCATION LIBRARIES

- ✓ Have an important role in the dissemination of credible scientific resources, increasingly in digital support.
- ✓ Must understand the rapid change imposed by ICT and take advantage of this change to evolve and better position libraries.
- ✓ Must reinforce users' information literacy skills, including through ICT
- ✓ Focus on the growing and inevitable digital transformation, since its utility is visible.