

Data Science & Social Research 2019

Book of Abstracts

Second international conference on data science and social
research

Editor: Paolo Mariani



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GLAM ORGANIZATIONS' DIGITAL MATURITY INDICATOR: A STATISTICAL APPROACH FOR CAMPANIA MUSEUMS

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Digital Maturity is a complex phenomenon, involving vertical as well as horizontal processes throughout firms. Therefore, the use of multidimensional tools represents the most appropriate approach in measuring companies' digital transformation status (Chanias and Hess, 2016). In recent years, Digital Maturity Models (DMMs) were developed in order to get a current measure of an organization's as-is digital capability (Deloitte, 2018). However, DMMs' effectiveness relies purely on raw data without taking into account items' different difficulties. Moreover, though the vast majority of digital maturity models are mainly focused on manufacturing based organizations, an understanding of the challenges and opportunities identified in each stage of the maturity model can help any organization to identify how digital can lead to success and income generation. The main focus of this work is try to overcome the lack of DMMs applications to the Italian GLAM sector, providing an alternative and more accurate indicator of digital ability, through a widely-used statistical approach. More specifically, we perform a Rasch Analysis using the last national survey on cultural organizations promoted by the Italian Institute of Statistics (ISTAT) in 2016, containing several questions about digital preservation and the use of digital tools in Italian museums.

KEYWORDS: digital museums, cultural heritage, Rasch model

References

- Chanias S, Hess T (2016) How digital are we? maturity models for the assessment of a company's status in the digital transformation. Management Report/Institut für Wirtschaftsinformatik und Neue Medien (2):1–14.
- Deloitte L (2018) Digital maturity model achieving digital maturity to drive growth. Presentation of Deloitte, TM Forum Digital Maturity Model, Feb.