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The digital divide revisited: Towards a multifaceted measurement instrument for digital inequality.

Over the last decade research has pointed out the highly complex and multidimensional character of the digital divide, which no longer solely refers to not having access to computer and the Internet, but entails various barriers related to access, motivation and digital literacies caused by a large number of – often intertwined – social and economic characteristics. Various measurement tools to map Internet use and/or digital inequality exist, such as the Digital Divide Index (DIDIX), Digital Opportunity Index (DOI) or the Oxford Internet Survey (OxIS). Question however remains to what extent these measurement tools are in line with the increased complexity and multidimensional character of digital inequality.

This study questions the theoretical and methodological issues related to the conceptualisation and measurement of digital inequality. Therefore, it entails 1) a theoretical reconsideration of the different elements and barriers that determine the digital divide; 2) a critical analysis of the various shortcomings of existing measurement tools; and 3) recommendations for improvement. The main research question is what the crucial determinants for digital inequality are, and how these can be translated into suitable indicators for quantitative measurement tools.

The theoretical framework of this study is based on a variety of digital divide research. On the one hand, it consists of an in-depth reconsideration of the four levels of access – mental, material, usage, skills – identified by van Dijk (1999). On the other hand, it is based on research related to the adoption and domestication of new technologies and the influence in this regard of social and cultural capital, lifestyles and life stages, usage context and learning trajectories related to digital literacies. The empirical research is based on desk-research and is aimed at mapping and analyzing the indicators put to the fore in various measurement tools such as Eurostat, DIDIX, DOI or the OxIS.

Results indicate that the majority of the existing measurement tools are highly limited in scope and mainly focus on easy-to-measure aspects such as quantity and frequency of use. Few measurement tools have incorporated the overall complexity of digital inequality. Also, too little attention is given to the measurement of the multidimensional character of digital literacies. The majority of the existing measurement tools focus on self-reported operational skills, and pay little attention to information-seeking or strategic skills. This paper tries to overcome these limitations in proposing an alternative measurement tool using new and improved indicators.