Educational Resources or Educational Scenario Description Form

Title	
	Exploring Critical DIgital Literacy Dimensions: DATA LITERACY

Abstract	
	The term "data" is becoming probably a sort of buzzword. What do we mean with "data"? How do you feel about the word "data"? And why should we need to be "data literate"? You might also come across "Big Data", "Open Data" ,"Data Science", Datafication" and "Datafied" as words. And overall, some of this words have positive connotations and others, very negative implications for our lives. Clearly, we deal with a problem with many facets. As educators, we need to explore them to understand which is the message we want to cater to our students. Overall, "data" refers to the digital data collected through our interaction with digital spaces, apps, and smart technologies, including the Internet of Things. And while this data might be part of open, public knowledge and could be mined to produce new human activities, like Artificial Intelligence, there are many connected problems. Not only the form into which data are collected, without the consent of the people from which such data are extracted, could be a concern. Also, the surveillance, the end users' manipulation through nudges and recommendations, or the misrepresentation of collectives are emerging issues connected to all the practices around data. As a result, there is increasing concern in developing data literacy. Data Literacy has received great attention over the last few years in relation to school practices and has been identified as one of the dimensions of the DETECT Critical Digital LIteracies framework. Although the issue of Data Protection is usually addressed by relevant policies at institutional level (mainly in relation to GDPR compliance) less attention has been paid to raising educators as well as students' awareness regarding the various aspects and sub-dimensions of data literacy. Within the DETECT project the aim is to develop educators' understandings of the multifacet issue of

data literacy and also support them with enhancing their students' practices in relation to data protection and safety, the use of opn data and data justice.

This interactive, self-paced learning resource introduces three perspectives on data literacy:

- Data Protection and Safety
- Open Data to develop critical citizens' data literacy –
- Data Justice: exploring the dark side of data

The resource can be used either in educators' workshops or continuing training. Also it could be a good source of learning for initial teachers' education.

Moreover, the teachers could adopt some of the concepts for self-paced learning aimed at design lesson plans on data literacy for secondary school learners.

Keywords	Data Literacy, Data Protection and Safety, Open Data, Data Justice
Language(s)	English
Framework topic(s) [See for more information: DETECT Report http://doi.org/10.5281/zenodo.5070329]	*[] Information and digital content use* *X Data Literacies* *[] Digital well-being and safety* *[] Digital communication and collaboration* *[] Digital citizenship* *[] Technology use* *[] Digital content creation* *[] Digital teaching and learning*
Framework Subtopic(s)	*Data analytics, Data Protection and Safety, The use of big and open data.*
Target	[] primary [] lower secondary school [X] upper secondary school [X] teachers (professional development resources)
Subject Area	*Interdisciplinary: Social Sciences, Math, Computer Science.*
Educational Type	[X] educational resource [] educational scenario
Media/Multimedia type(s)	[X] text [] image [] audio [X] video [X] Interactive Dataviz
Genre	*Short Video Presentation and Video Resources for Learning* *Text: Documents, presentation, ebook, lesson plans* *Image: graphics, pictures*

	Website with integrated resources: video, documents, interactive graphics
File format	i.e. mp4, ppt, jpeg, txt, pdf,... GoogleSites, mp4, Mentimeter presentation
Author(s)	Juliana Raffaghelli and Anastasia Gouseti
Usage rights or copyright	[] Public Domain [] Attribution (CC BY) [] Attribution – No derivatives or adaptations (CC BY-ND) [] Attribution – Share Alike (CC BY-SA) [] Attribution – Only noncommercial uses (CC BY-NC) X Attribution – Only noncommercial uses – Share Alike (CC BY-NC-SA) [] Attribution – Only noncommercial uses – No derivatives or adaptations (CC BY-NC-ND) [] All rights reserved
Link to the resource	https://sites.google.com/view/lttadataliteracy/home
Link to example of educational use of the resource	If applicable, add link to Educational scenario indexed in the Toolkit

Additional categories for Educational scenario

Prerequisites	Ideally, this resource should be introduced prior to a workshop activity. The resource is aimed at working with educators in three phases: 1- Prior reading and exploring the teachers' own approach to data 2- Workshop with discussion 3- Design for Learning
Learning objectives	1) To understand how data shapes our contemporary society, with relevant impacts on the educational context 2) To explore at least one of the several three perspectives on the problem of data in the society 3) To be able of designing for learning to support the development of data literacy in one of the three areas: data protection and safety; open data for critical citizenship; data justice.
Teaching strategies	X Direct teaching (e.g. teacher giving a lecture to introduce key concepts) X Modeling (e.g. thinking aloud technique based on teacher shaping conceptual reasoning)

	X Discussion (e.g. students engaged in an open debate on a certain topic)
	X Group work (e.g., students working in small group to pursue a common objective)
	X Project work (e.g., students working in small group to develop a project)
	X Self-paced learning based on video and interactive resources
Duration	Min 90 minutes Max 240 minutes

Development	Self-paced learning: 90 minutes per 3 learning pathways at learners' will. Workshop: 240 mins (90 self-paced, 30 presentation/orientation, 60 groupwork, 60 plenary session)
	
	The activity starts with two introductory videos (15 mins)
	In the two videos, the concept of "data cultures" is introduced to reflect about the complexity of data in our societies. Dat cultures stands for a contextualised use of data, within education institutions, that allow the users to learn and to embrace balanced perspectives on data, to learn to live well with the above mentioned technological change. Therefore, the embedded idea is that data literacy requires not only technical, but also aesthetical, political and ethical approaches to understand and use data.
	The videos are followed by a brief reading, that prepare the participants' choice of an activity of the three pathways offered.
	
	The learners are invited hence at select one of the pathways [ASYNCHRONOUS ACTIVITY, 90 minutes]
	
	We introduce three perspectives about data, as a complex problem, and invite you to select one to start learning.
	
	    ▪ **Data Protection and Safety -** Combining a reactive data "mindset" and the need to protect personal data, we'll explore the role of educators in supporting their own and ther students' awareness, security and safety while going through digital spaces.
	    ▪ **Open Data to develop critical citizens' data literacy** - Combining a proactive data "mindset" and the possibility to access to public, open data, we'll explore how open data can be used for civic education, also cultivating data visualization and data storytelling.
	    ▪ **Data Justice: exploring the dark side of data** - Combining a reactive data "mindset" and the need to access and generate fair public, open data, we'll explore the role of educators in promoting data justice.
	
	Therefore, there is a moment to share, discuss and prepare for designing a lesson plan as final outcome **[ASYNCHRONOUS ACTIVITY, 40 min interactions with resources] + [SYNCHRONOUS ACTIVITY, 90 min workgroup and 60 min plenary session]** The participants engage with resources connected to the perspective chosen, and will debate around possible and future pedagogical practices.

Evaluation strategy	*Specify the (self-)evaluation strategy to assess learning results (you may indicate more than one technique)* X Self-evaluation (e.g. students self-evaluate their products) X Peer evaluation (e.g. mutual evaluation among students) X Course evaluation by the participants.