Sustainability literacy in older age groups: on the way to sustainable development

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Research Questions

Can Sustainability Literacy in older age groups be a driver for Sustainable Development?

What is the impact of a Sustainability Literacy class in the behaviour and decisions of elderly citizens?

Importance of the study

This work proposes a paradigm change regarding Education for Sustainability, by focusing the efforts on a demographic group less studied: the elderly.

- The traditional approach on teaching children towards Sustainability may not yield results on the short time needed.

- Education is essential for Sustainable Development (UNESCO).

- The new SDGs (UN) are an opportunity to improve the quality of life for people of all ages;

- Sustainable Development Literacy will generate the economic, social and cultural conditions required for Sustainable Development.
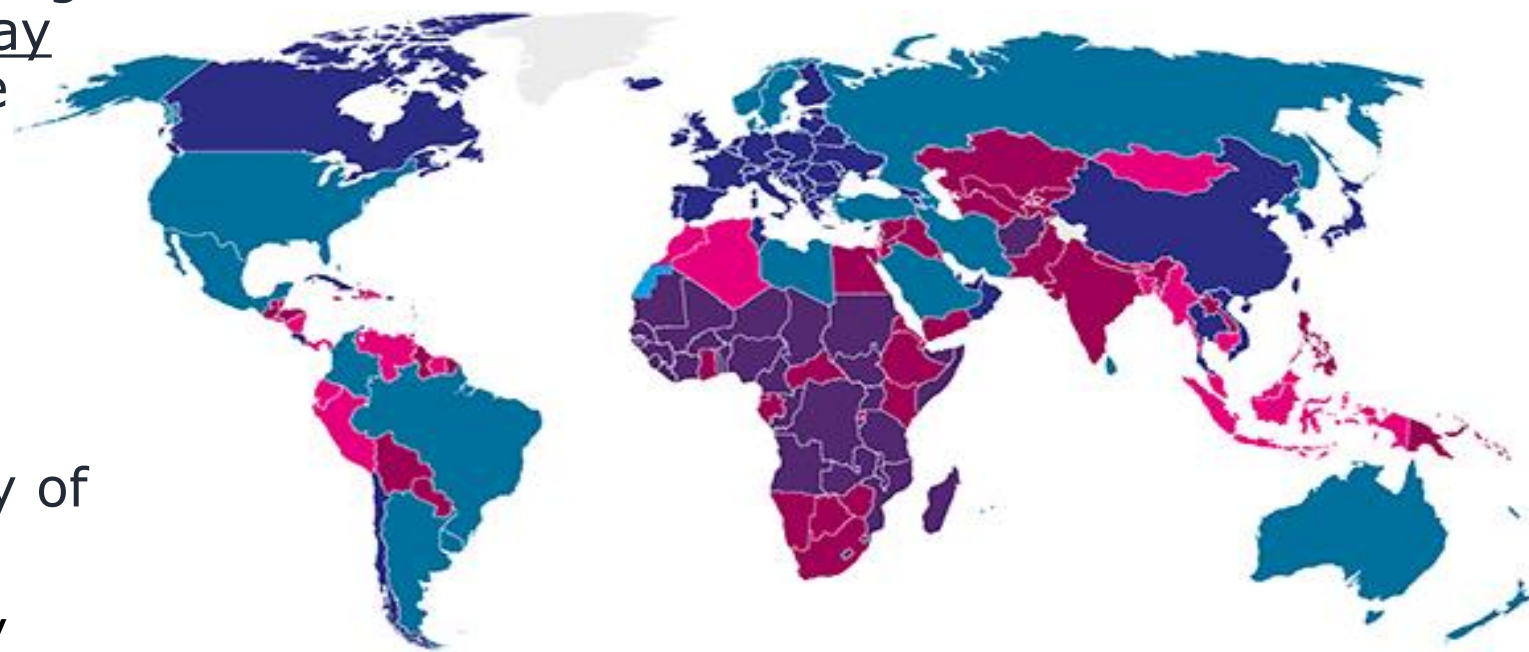
% of population over 60 in 2050

| 0–9% | 10–19% | 20–24% | 25–29% | 30% | No data |

Source: UNDESA Population Division, World population prospects: the 2012 revision, DVD edition 2013.
Note: the boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

Literature review

- There is an inevitable <u>ageing of the population</u> according to the models for future demographic changes (United Nations, 2007);

- The elderly are often overlooked as a population group in social and economic studies.
    - in their models the World Bank assumes less social value to yield from improvements in Health Systems if they target older age groups (Paalman et al., 1998)

- <u>Empowering the elderly</u> is considered as the "capacity to make informed choices, exert influence, continuously contribute to society or benefit from its services" (Kelly, 2006).
    - This empowerment is deeply tied with <u>participation</u> (United Nations, 2007).

- There seems to exist a correlation between <u>happiness of individuals and Sustainable Development</u>, driven primarily from intentional actions that the individual can choose to perform in the community (Zidansek, 2007)

Literature review (ii)

- Education is essential to Sustainable Development in all stages of life (United Nations, 2007)

- Education is very important in the context of the broader SDGs – it is connected and a driver for most of them (Vladimirova and Le Blanc, 2015)

- The elderly, particularly those who are grandparents, have a crucial role in nowadays society, supporting their families by providing childcare to children of working parents

  - 20% of grandparents in Britain provide this kind of support (Kenner et al., 2007).

  - These interactions are commonly seen as similar to those of parents but a deeper look shows that they can be mutually beneficial, enjoyable and educational (Jane & Robbins, 2007; Kenner et al, 2007).

  - Support from grandparents make the child an expert in tasks s/he could not accomplish alone, and children also supported grandparents' learning, particularly in tasks involving ICT and even in the use of English (immigrant families);

    (study from Kenner et al. (2007) which analyzes the intergenerational learning interactions between families in East London regarding Information and Communication Technology (ICT) concepts).

Methods and data collected

- This work takes place in a U3A, located in a suburban Lisbon community of around 12000 people, half of which are over 50 years old; 44% of the population of this community holds a higher education degree (INE, 2012).

- The U3A has +300 students, 25 of which are enrolled in the Scientific Literacy class.

Class goals

Promote Scientific and Sustainability Literacy	Empower the senior population with knowledge to better understand and act on their day-to-day	Improve intergenerational understanding	Provide a platform for discussion and sharing of Scientific and Sustainability topics

- 1 weekly active learning session (90min);

- A short video is used to introduce the topic for each class, followed by a guided discussion to support students construct concepts, definitions and explore relationships;

- Students apply the knowledge by creating a weekly poster that is shared in the U3A facilities;

- After class, students receive a follow-up email with a link to the video and the notes on the matters discussed. Those are also placed on a website;

- Students are encouraged to propose topics, based on their day-to-day experiences and curiosity.

Methods and data collected (ii)

- To gather feedback on the impact of the Scientific Literacy class:
  - Observational results were collected;
  - An exploratory focus group was conducted for students who wished to volunteer.

- The focus group was composed by 5 people, 1 man and 4 women, with ages between 65 and 78 years old (average age of 70.8 years). All participants have higher secondary or university degree.

- The 1 hour focus group interview occurred in October 2016, at the facilities of the University of the 3rd Age, where the subjects are attending the Scientific Literacy class.

- The focus group was conducted as a non-structured interview with the goal of gathering the subject's opinion on:
  - the Scientific Literacy class,
  - its contents and
  - its impact on the students' day-to-day life.

Results and discussion

Category	Subcategory	Occurrences	#
Motivation	Personal satisfaction		6
	Occupation of time		2
	Knowledge acquisition		4
	Knowledge update		5
	Usefulness		6
Feedback on the class	General feedback		12
	Class contents		10
	Methodology		11
	Teacher		5
	Areas for improvement		1
Acquired Knowlegde	Literacy / competencies		7
	Interpreting messages from health professionals		0
	Health condition self-assessment / usage of Health Services		0
	Therapy/Vaccinal adhesion		1
	Interpretation of messages from the media		1
Knowledge Transfer	Intragenerational		6
	Intergenerational		5

Content analysis categories for the exploratory focus group interview

Results and discussion

The results from this focus group suggest that the students experience:

- **personal satisfaction** with the <u>time</u> invested in the class and with the <u>methodology</u> applied;
- motivation towards **learning** and **knowledge update**;
- greater ability to **understand messages in the media**;
- greater likelihood to **follow the prescribed therapy** and **vaccination** programs;
- greater **understanding of the content** covered in the class, **articulating concepts** clearly.

The increase in literacy led to knowledge transfer of two types:

- **intragenerational transfer** with friends, relatives of similar age;
- **intergenerational transfer**, primarily with grandchildren.

Content analysis categories for the exploratory focus group interview

Results and discussion

- The preliminary focus group shows that this work is contributing to SDG (Education):
  - "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles (…)";

- It seems to be possible to contribute, through Education, to other SDGs, such as the SDG 3 (Health);
  - For example, one individual describes how she explained to a friend that a flu vaccine does not actually contain the virus and, with that, made her more comfortable about taking the vaccine.
  - Another example happened when an individual explains to a friend that claimed to have the flu that, in reality s/he only felt symptoms related to the common cold. It is our understanding that even if it is only on a very small scale we have contributed to an increase in immunization rates.

- The same kind of behavioral change can be obtained in other Sustainable Development areas and SDGs if similar literacy-fostering activities are performed.

  SDG7 – Affordable and clean energy; SDG12 – Responsible consumption and production; SDG13 – Climate action;

Conclusions and recommendations

- Literacy can empower citizens to better understand the real-world phenomena.

- By developing Science Literacy, we have observed that elderly citizens quickly learn, apply and share their newly acquired knowledge, having influence and impact, through their networks, on society's understanding of these topics.

- The results suggest that initiatives to increase literacy lead to immediate behavior changes and knowledge dissemination among family members and within the community.

Conclusions and recommendations

- Expanding the scope of this project to a broader set of SDGs could lead to an overall increase in Sustainability Literacy and, therefore, to:
  - an increase in the ability of the target group to better understand a broader set of Sustainability challenges;
  - a better preparation for decision making and consumption choices;
  - active sharing of knowledge in their community and family to scale the impact further.

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