



Seniors in Green Action – from Hands to Minds to Souls

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GUIDELINES

ON ENGAGING SENIOR ADULT LEARNERS IN NON-FORMAL EDUCATION ON THE TOPICS OF RECYCLING AND CIRCULAR ECONOMY

SHORT VERSION

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Part 1 - Basic principles of environmental protection, sustainability, recycling and circular economy

Environment

- **Natural environment:** This type collects everything that is the climate, flora, fauna, geography and everything that is present naturally.
- **Cultural environment:** It is everything that is artificial created by human beings and their socioeconomic activities.

Therefore, it could be said that the environment is the relationship of a system that is formed by the set of natural and artificial elements that interact with each other and that are related to each other. In addition, they have been modified by humans. Therefore, the environment must be conserved and managed, since it conditions the way of life and makes us create adaptations (Renewable Green).

Environmental Protection

Environmental protection is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends.

Importance of Environmental Protection

It has become inherently important to work towards environmental conservation in present times. The following pointers explain the crucial need to save the environment from further degradation:

- To reduce air, water and land pollution.
- To facilitate the conservation of natural resources for our future generations.
- To ensure the protection of biodiversity.
- To implement sustainable development.
- To restore the ecological balance.
- To save our planet from harmful repercussions of global warming (Leverage Edu).

Ten Simple Things You Can Do to Help Protect the Environment

- Reduce, reuse, and recycle. Cut down on what you throw away. Follow the three "R's" to conserve natural resources and landfill space.
- Volunteer. Volunteer for clean-ups in your community. You can get involved in protecting your watershed, too.
- Educate. When you further your own education, you can help others understand the importance and value of our natural resources.
- Conserve water. The less water you use, the less runoff and wastewater that eventually end up in the ocean.
- Choose sustainably.
- Shop wisely. Buy less plastic and bring a reusable shopping bag.
- Use long-lasting light bulbs. Energy-efficient light bulbs reduce greenhouse gas emissions. Also, flip the light switch off when you leave the room!
- Plant a tree. Trees provide food and oxygen. They help save energy, clean the air, and help combat climate change.
- Don't send chemicals into our waterways. Choose non-toxic chemicals in the home and office.
- Bike more. Drive less (National Ocean Service).

Sustainable Development

In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development.

Sustainable Development Goals and the 2030 Agenda

1. To gain an in-depth understanding of sustainability and its implications, it is essential to mention the Sustainable Development Goals and the 2030 Agenda. The 2030 Agenda is the successor to the Millennium Development Goals and is structured through the so-called Sustainable Development Goals (SDGs), of which there are a total of 17 goals (Santander Scholarships).

Figure 1: Sustainable Development Goals

Source: European Commission

Accessible at: https://international-partnerships.ec.europa.eu/policies/sustainable-development-goals_en**Circular Economy**

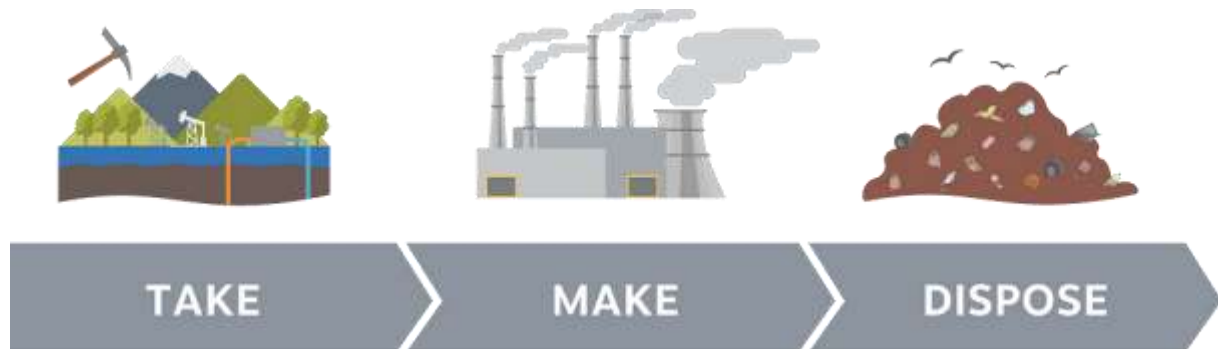
According to the United Nations Industrial Development Organization, circular economy is a new way of creating value, and ultimately prosperity. It works by extending product lifespan through improved design and servicing, and relocating waste from the end of the supply chain to the beginning—in effect, using resources more efficiently by using them over and over, not only once.

By and large, today's manufacturing takes raw materials from the environment and turns them into new products, which are then disposed into the environment after use. It's a linear process with a beginning and an end. In this system, limited raw materials eventually run out. Waste accumulates, either incurring expenses related to disposal or else polluting. On top of that, manufacturing processes are often themselves inefficient, leading to further waste of natural resources.

Figure 2: Linear Economy

Source: Metabolic

Accessible at: <https://www.metabolic.nl/what-we-do/circular-economy/>



However, in a circular economy, products are designed for durability, reuse and recyclability, and materials for new products come from old products. As much as possible, everything is reused, remanufactured, recycled back into a raw material, used as a source of energy, or as a last resort, disposed of.

Figure 3: Circular Economy

Source: European Parliament

Accessible at:

<https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits>



Reduce, Reuse, Recycle Approach

In order to keep as much material out of the landfill as possible, it's important for each of us to do our part. One of the ways to put that plan into action is through the 3 Rs of waste management – Reduce, Reuse, Recycle.

Reduce, Reuse, Recycle - these three 'R' words are an important part of sustainable living, as they help to cut down on the amount of waste we have to throw away.

It's Really simple!

1. Reduce the amount of waste you produce.
2. Reuse items as much as you can before replacing them.
3. Recycle items wherever possible (Solar Schools).

Recycling

Recycling is the process of converting waste materials into new materials and objects. The recovery of energy from waste materials is often included in this concept. The recyclability of a material depends on its ability to reacquire the properties it had in its original state. It is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions. It can also prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, reducing energy use, air pollution (from incineration) and water pollution (from landfilling).

International Recycling Symbol

The international recycling symbol is a widely used symbol used to designate recyclable materials. It consists of three „chasing“ or „pursuing“ arrows that form the so-called Mobius strip with triangular outline symbolizing the circle of nature and the closed cycle („creation - use - processing“).

Figure 7: International Recycling Symbol

Source: Nature.com

Accessible at: <https://www.nature.com/articles/s41393-019-0246-8>



Part 2 - Creating a suitable learning environment for elderly adult learners and basic principles of effective engagement of seniors in educational and community-based activities

Meaning and types of education systems

Formal Education

Formal education is defined as education that is institutionalized, intentional and planned through public organizations and recognized private bodies ([United Nations Educational Scientific and Cultural Organization, 2011](#)).

Informal Education

Informal education is training in everyday life, at work, at home or leisure time. There is no structure and certification related to training objectives or duration of training. The term "informal" suggests that such activity occurs without procedural formalities. It corresponds to the structure of adult life (Kominarets, et al. 2022).

Non-Formal Education

Non-formal education could be defined within an education spectrum that incorporates how it relates to formal education and informal learning. Based on this approach, UNESCO defined non-formal education as an additional, alternative and/or complemented to formal education within individuals' lifelong learning process. It is often provided to guarantee all the right to access education. It caters to people of all ages but does not necessarily apply a continuous pathway structure; it may be short and/or low intensity and is typically provided in short courses, workshops or seminars.

Kolb's learning cycle and its implications for the seniors' informal and non-formal education

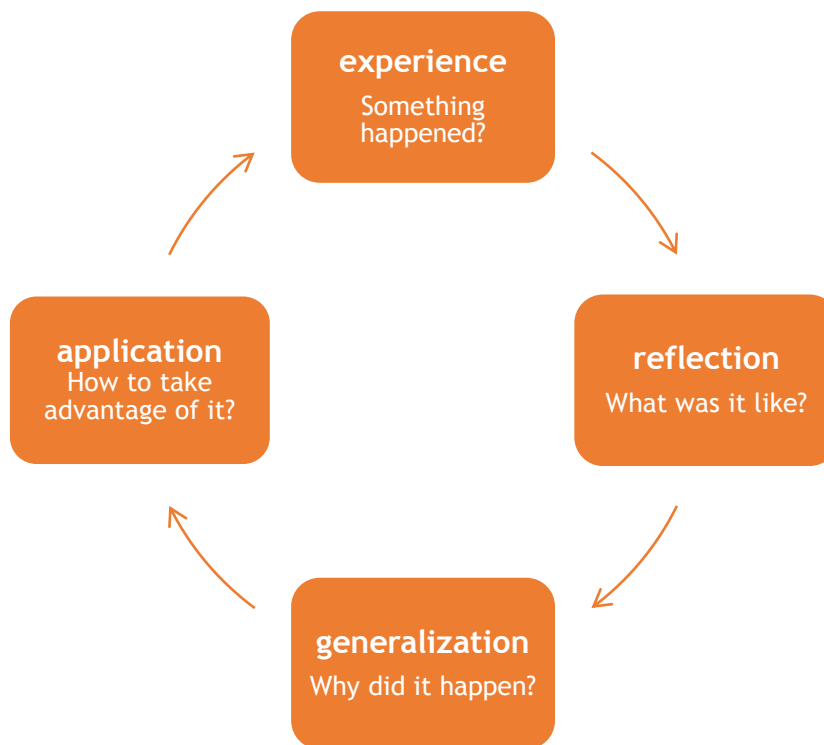
Among many learning methods developed mainly in the 70s or 80s (e.g. Learning Together and Alone Teams-Games-Tournaments (TGT), or Group Investigation) was one proposed by David Kolbe in 1974. It is based on the experiential learning theory that older people can

adopt to improve their learning process. The method uses the design of learner-centred experiences that promote balanced learning.

The experiential learning theory is a model of adult development that assumes that experiences play a vital role in the learning process. Experiential learning theory postulates that learning is the process by which knowledge is created through the transformation of experience (Kolb, 2014).

Figure 5: Kolb's learning cycle of adults

Source: Kazimierska, I., Lachowicz, I., Piotrowska L., (2014), Kolb, D. A. (2014)



The experiences of seniors' teachers - review

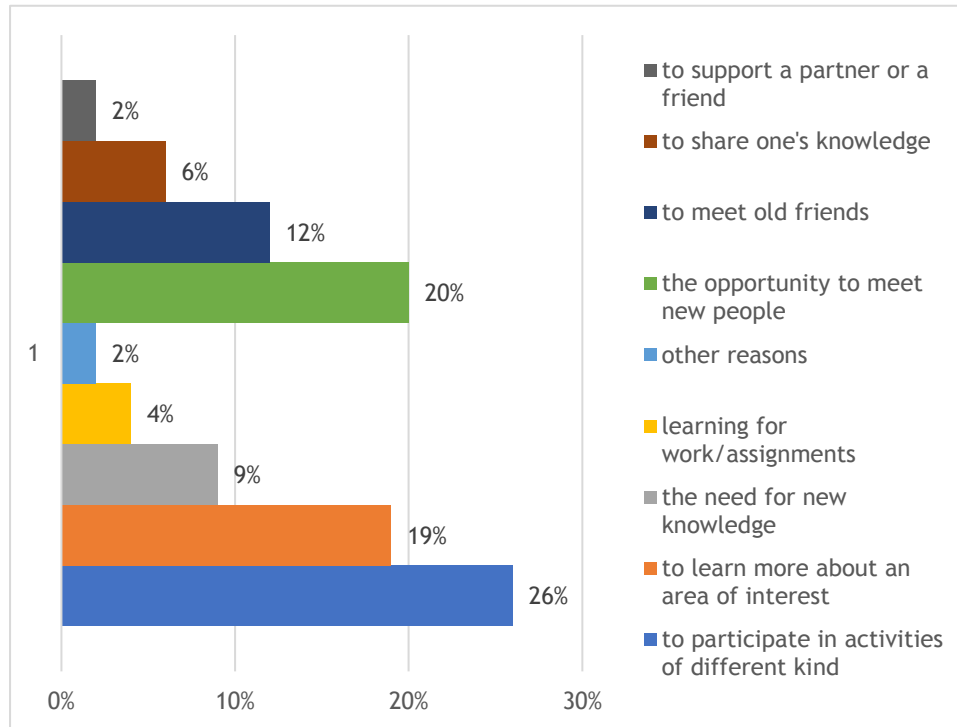
It has been recognized that non-formal learning activities are preferred by older adult participants (Jenkins, Mostafa, 2015; Bjursell, 2018). Furthermore, it is crucial that older adults can control their own time and choose the activities they wish to engage in. They are willing to do a great deal in this area if they can do it on their own terms, as autonomy is an even more articulated need as we age (Bjursell, 2019).

There are several reasons why older adults might wish to engage in learning. However, they can be summarised as wanting to stay active and socialize, which is confirmed by numerous

studies, e.g. Bjursell, 2019 provides arguments why the respondents participate in education activities as presented in Figure 6.

Figure 6: Reasons why older adults might wish to engage in learning

Source: Authors' own work based on Bjursell, C. (2019)



Organization of the model workshop on recycling for seniors - general recommendations

- **Workshop - information channels** - various information channels - press, radio, television, leaflets, application, word of mouth marketing, a group of information volunteers.
- **Educator** - He/she must carefully prepare for classes - the elderly are among the most demanding, exciting and inquisitive educational groups. The tutor can propose his rules, e.g. "we do not judge ourselves and others", and use the term "agreement" or "set of rules". The educator presents the effects of the course before it begins. The workshop leader should answer questions but also be able to admit that he/she does not know something, apologize, and look for answers. Everyone ages differently, and a good educator should be able to deal with it; he/she must be familiar with the specifics of working with the elderly. During the workshop, the tutor tries to get to know the group, is interested in the participants, and adjusts

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the language, speech clarity, and volume to the needs of the people participating. The educator should be a nice person, creating a positive atmosphere. He/she should transfer knowledge and not appropriate it, and emphasize creative thinking and methods of integrating knowledge with experience, e.g. "let's talk about your experiences with ...". He/she stimulates the engagement of participants. He/she applies good practices in educational work with seniors: sympathy, respect, patience, lack of criticism, commitment, partnership, support, empathy, motivation, sense of humour, assertiveness, and gratitude.

- **Workshop title and description** - the workshop should have an encouraging name, i.e. a catchy, "sexy title", and at the same time, a meaningful topic/s; the substantive content should be conveyed "by the way", e.g. "let's talk about..." It is necessary to present the workshop's goal, plan and outcomes.
- **Workshop content** - the knowledge transferred should be of the best quality, and the form of the workshop cannot exceed the content.
- **Workshop location** - older adults prefer activities that do not require a longer journey. The workshop can be conducted both indoors and outdoors. Close to where they live; a safe neighbourhood, a safe road to the workshop site (taking into account the time of year and day), and close to public transport.
- **Building** - A friendly, cool place, e.g. a cafe, gallery, club, library, etc., where we can "talk about something", preferred level "0", a place adapted to the needs of the elderly (e.g. ramps, stairs, handrails, elevators, type of surface), need to be close to the bathroom.
- **Workshop room** - *spacious* (cannot be too cramped; there must be room, for example, for participants' personal belongings and rehabilitation aids), *appropriate furnishings*, i.e. durable furniture, comfortable seats, preferably chairs with backrests and handrails (easy to get up from); *the arrangement of furniture*, i.e. furniture that can be easily rearranged, e.g. preferred tables arranged in a circle; *safety*, among others no sharp edges, lots of cables, unstable carpets and rugs; *appropriate temperature and ventilation, lighting*: preferred daylight, glare avoidance - use of curtains, blinds; *sound system*: elimination of noises, humming; attention to good acoustics, the possibility of closing doors and windows if necessary.
- **Time arrangements** - not too early - "after coffee, but before lunch"; duration - 2 to 3 hours, the public transport timetable should be considered (bus, tram, metro etc. - if possible, check if it includes low-floor vehicles).

- **Participants** - choose people who can later act as leaders in their environments; strive for social integration - try to invite people from different groups to classes - activate men, people with lower education and income; smaller groups - up to 15 people, the group can be very diverse - there is a strong variation in the course of aging.
- **Educational aids** - use traditional educational aids (e.g. boards) and teaching materials (e.g. presentations, leaflets) adapted to the needs of older people (page layout, text formatting, font, contrast, colour saturation and shading, graphics). When using new technologies, it is also important to take into account the needs of the participants - preferred tasks using the phone, with which older people are more familiar than with the computer.
- **Working materials to be used during the workshop** - the choice of materials depends on the workshop subject; they may be related to participants' experiences. When inviting them, one can ask to bring some of the materials that will later be used during the workshop, depending on the types of waste to be recycled.
- **Learning atmosphere** - "*incentives,*" e.g. coffee, tea, water; tasty refreshments; *attractive place* (aesthetic, nice, festive space); *building relationships* - the relationship between participants and the educator as well as between participants themselves are very important; the possibility of establishing and deepening acquaintances; casual/friendly atmosphere conducive to active participation , e.g. asking questions and *building a sense of community*.
- **Workshop assessment** - evaluation survey.
- **End of the workshop** - distribution of educational materials related to the promotion of the circular economy. Development of, e.g. a book of good practices, a library of recommendations, prepared following the needs of the older adults. Offering a meaningful souvenir (something reasonable/valuable that can be taken home and will remind the participants of the workshop's leitmotiv and motivate them to apply the acquired knowledge). It is essential to summarize and thank them for participating in the workshop.

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