AGE-RELATED CHANGES IN PEOPLE OVER 60: IMPLICATIONS FOR SECOND LANGUAGE LEARNING AND TEACHING. *

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Longer life expectancy and easier ways of traveling have modified the over-60's way of life in rich countries. The concept of life-long learning, the desire for self-fulfillment, and the interest in cultures different from one's own are the main reasons why people over 60 take up language courses abroad or in their own country. Our paper examines the over-60s in relation to their increasing demand for foreign language courses. The age-related physical and psychological changes of this group that could have an influence on the language learning process should be considered by the teacher, e.g. when deciding the language teaching techniques to be employed. Furthermore, knowledge of the over-60's specific needs, abilities and potential could be applied to the design of a targeted foreign language syllabus. The aging process is different in each individual and some suggestions for language teaching might not be necessary for those who are not subject to the age-related changes mentioned; they can however make the teaching and learning process easier in language classes made up entirely of people over 60.

Key words: age-related changes, second language teaching and learning, syllabus design, over-60s.

1. Introduction

Our research originated from an analysis of the statistic data on world population and the consequent consideration of the needs of a possible new and increasing public, made of people over 60 years old, for the courses of Italian as a second language. The prolongation of life span affects mainly the population of the EU countries and Japan (The Economist, 2003: 28). These are the countries that are, traditionally, most interested in the study of the Italian language (De Mauro *et al*., 2002).

The main reasons why people over 60 take up language courses abroad or in their own country can be related to: better life conditions and the consequent longevity of life, the concept of long life learning which now permeates the mentality of people who are lucky enough to live in economically developed countries and the desire of self-promotion and self-fulfilment (endorsed also by UN through the resolutions adopted in the *Plan of Action on Ageing*, 2002),[1] easier ways of travelling, interest in cultures different from one's own. Foreign language courses targeted on the needs and the physical and psychological characteristics of these learners could contribute to a potential increase of the public for these courses. Thus, after analysing the age-related changes that could influence the process of second language learning in people over 60, we will attempt to give some suggestions as for the language teaching that could be considered when planning a syllabus and make the teaching and learning process easier for this type of public.

2. Relevant physical and psychological age–related changes that occur in people over 60

It is difficult to make statements that are universally valid, because the aging process is different in each individual, depending on the different genetic

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[1] http://www.un.org/esa/socdev/ageing/index.html, web-site visited in November 2002.

characteristics and the different life styles. The following, however, are the most common changes reported by handbooks and scientific journals on geriatry.

2.1. Eyesight

> During a normal aging process some physical changes occur that gradually determine a reduction of the visual faculty. About 13% of people over 65, or older, reports eyesight problems and this percentage is about 28% in people over 85 (Beck 1994: 28, 201-202). After pointing out that there is a wide individual variation we can however draw a general outline of the age-related changes in eyesight (Nebuloni, 1989: 13; Hogstel, 1993: 14):

• Reduced static visual acuity and, to a larger extent, diminished dynamic visual acuity (ability to distinguish details in an object in motion).

• High sensitivity to light.

• Alteration in the ability to distinguish distances and colours.

• Reduction of the accomodation ability for close objects.

• Reduced night vision.

• Reduced peripherical vision.

• Slower adaptation to sudden changes from light to darkness.

• Need of a stronger contrast between an object and its background, in order to identify the object with precision, especially under conditions of poor lighting.

2. 2. Hearing

Hearing loss is the most widespread sensory loss in aged people. It has been estimated that approximately 30% of people between 65 and 74 and about 50% of those between 75 and 79 suffers, to a certain extent from hearing loss, presbyacousis (Hogstel, 1993: 98-99). However, not all individuals are

affected by this loss and it is less strong in women. Impairments concern the absolute treshold of the tones and the ability to discriminate the tones. The discrimination of the tones plays an important role in the reception of speech. The ability to distinguish words in speech decreases with age. From the age of 6 to 59 the ability to perceive speech clearly decreases less than 5% but it decays quickly afterwards, decreasing more than 25% from the maximum levels after 80 (Beck, 1994: 29). The hearing ability of aged people decreases in a noisy environment or in blurred speech. Some researchers maintain that the hearing loss changes the general and psycho-social functions in aged people and is connected with the decay of cognitive functions (Beck, 1994: 200).

2. 3. Intellective processes, learning and memory

Making generalizations on brain aging is even more difficult because the individual character of the process adds to the insufficient knowledge on human brain. Furthermore, standard tests used in researches are often criticized as unsuitable to aged people. Thus, the outline drawn here is open to new observations and corrections that will result from future researches and experimentations.

At present, we can state that the best performances in terms of memory, reaction time to visual and auditory stimuli, comprehension of technical problems, manual skill and work pace are obtained around the age of 30. From that time on, the various mental functions are subject to a physiological decay, whose extent, speed rate and time of occurrence vary for each function. In general, the changes that can be observed in aged people are: a reduction of speed in the intellective processes and a longer latent period in the execution of manual tasks and in verbal answers (psycho-motory slowdown, typical in aged people). These modifications, however, do not cause a fundamental change in the quality of the results. The decay of mental functions can be remarkable and become pathological only in old age (after 70), with individual variations due to genetic and socio-cultural factors and specific pathologies (Mauri & Penati, 1996: 28).

2.3.1. Intelligence

> Intelligence, meant as ability to find effective solutions in new and problematic situations, is a function that is highly integrated with the other cognitive, emotional and motivational structures. During the aging process, a gradual decay of the operational abilities of intelligence and a tendency to mental inactivity can be noticed (Mauri & Penati, 1996: 28).

Intelligence is measured through tests. The results of verbal tests (i.e. the degree of the ability to retain information, vocabulary and comprehension) are good also in aged people, whereas the results of the performance tests (i.e. associating symbols and numbers, putting pictures in order) show a decline with the progress of age.

The analysis of these data suggested the explanation that verbal functions measure, to a large extent, what the individual already knows (it is the crystallised intelligence, that remains stable during the whole life span); performance functions, on the contrary, imply dealing with unfamiliar topics, involve logic connections and emphasize the role of speed response: they measure the fluid intelligence, that depends on brain conditions and is more subject to age-related modifications (Beck, 1994: 41). Some cross studies have recorded a weaker thought flexibility in problem solving tasks in aged people, in comparison with younger ones (Beck, 1994: 40).

It must be pointed out that the tests employed in the researches on intelligence have been criticized for various reasons. They emphasize speed response too much, thus disadvantaging aged people, who are slower than young ones. Aged people, however, tend to evaluate the answer more accurately giving more precise answers. It is also necessary to evaluate the degree of pertinence of tests to the elderly's daily life; this pertinence allows older adults to obtain better scores in comparison with those of younger adults, even if older adults had lower scores in traditional tests (Beck, 1994: 41-42).

2.3.2. Learning

The learning faculty does not change in aged people until the age of 80/90 (Hogstel, 1993:18). However, it can be noticed a reduction in the selective attention ability, that is a consequence of the slowdown in the information processing speed and of eyesight and hearing problems. In the aged people's attitude toward learning new information can also be noticed a greater caution and hesitation for fear of making mistakes and a slowdown in the manual abilities and in the fluid mental ones, whereas the crystallised abilities, connected with the individual's already acquired knowledge remain intact. Vocabulary, for instance, increases with age (Giglioli & Alfieri, 1993: 27; Hogstel, 1993: 18).

2.3.3. Memory

The classic model of memory systems includes: sensory storage, short-term memory, long-term memory.

Memory capacity is measured with tests that, employed with aged people, are subject to the same criticism that has been levelled against the intelligence tests, that is to say, their pertinence to the daily life of aged people. Researchers emphasize the considerable individual variability in possible memory impairments noticed in aged people (Mauri & Penati, 1996: 29). Furthermore, the damage of some simple performances does not involve necessarily a damage of the more complex ones, that are often preserved thanks to compensating mechanisms (Beck, 1994: 41).

After the age of 60, people begin to notice that their memory is not the same as before and aged people probably become more conscious of this loss because other related cognitive disorders, as mental or attention impairments, make it more remarkable. We must also consider the psychological aspect of the fear of memory loss, fear that is often stronger than the actual loss. Aged people often complain to be unable to remember but this phenomenon can be considered an ipomnesia rather than an actual amnesia; in fact a small suggestion enables them to recall the information.

The disorder concerns mostly the recalling of recently acquired information and only later it affects the ability to recall older memories (Mauri & Penati, 1996: 28-29).

The elderly appear to be disadvantaged in the experimentations, as for the sensory storage (iconic and echoic), in comparison with younger people, likely because of the age-related sensory changes. The information transfer slows down and mistakes can be made (Tammaro *et al*., 2000: 476).

Short-term memory, or working memory includes a general central executive and two subsystems, the phonological loop and the visual-spatial sketchpad. The phonological loop capacity is measured asking the person who is taking the test to repeat a list of numbers or words. Older adults are as able as younger adults to recall the first and the last words of the series, while a decay in the visual-spatial memory is showed by tests that measure the capacity of the visual-spatial sketchpad (Tammaro *et al*., 2000: 477).

Long-term memory includes two systems: one stores memories of past experiences for a long time and includes subsystems called, episodic memory, semantic memory and perspective memory. Episodic memory, that stores memories of public or autobiographical events, becomes less efficient with age. There is no confirmation to the so called Ribot's law, according to which aged people remember childhood events better than recent events (Tammaro *et al*., 2000: 477). Semantic memory stores word meaning, education and knowledge of a person, of an historical event, of a place. This memory remains efficient or improves until the age of 70. Perspective memory enables people to plan future events. The efficiency of this kind of memory in daily life depends on the importance and meaning of the planned task. The other memory system includes procedural memory, that encodes and stores for a long time the knowledge of rules of action and procedures, which can become quite automatic with repetition. It includes the ability to learn motory-perceptive and verbal-perceptive skills and cognitive strategies. Procedural memory does not decay with age (Tammaro *et al*., 2000: 477-78).

As for the encoding, that is to say the fitting in and fixing of information in memory, we can state that aged people need more time and

more effort than young people to encode the same amount of information. This means that helping aged people in their learning process implies:

- Paying special attention to the choice of meaningful and motivating tasks, since the role of motivation is fundamental to retain information,

- Increasing the amount of information, trying to involve many faculties at the same time (visual and auditory stimuli),

- Giving instructions on how to organize the information,

- Gratifying the learner for the result achieved.

Once the information has been well encoded, both by young and old adults, its fixing is similar in both groups (Beck 1994: 40-41).

2.4. Some psychological aspects of aging

> Together with youth, old age is the life time that demands a great adaptability to a human being, since it causes remarkable psychological changes. There are many problematic issues that elderly people have to deal with: a change in their role in family and in society, some possible economic limitations, the loss of beloved family members, relatives or friends; these are all elements that can deeply influence a person's psychological balance, causing more vulnerability (Giglioli & Alfieri, 1993: 26).

The aging process shows individual characteristics, dependent on the importance and the quality of affective factors, social and psychological factors (self-esteem, self-defenses, motivations, adaptation modalities) as well as on problems related to a person's health condition (Nebuloni, 1989: 16). Thus, the individual reactions to the new life dimension are different: they range from the withdrawal into oneself to the search of relationships with other people and the development of new or usual activities, with the awareness of the privilege to have time for oneself.

As for the specific psychological characteristic we can state that the elderly's personality reflects that of the adult age, even though it has often been noticed that these characteristics tend to become more marked, either in their positive and negative traits (Gala *et al*., 1996: 46). As teachers, we must be aware of the delicacy of this life time to work with the class group at our best and make the learning process easier.

3. Language teaching implications and suggestions on suitable syllabus design and teaching techniques

The previous outline suggested us some ideas as for the language teaching. When designing a foreign language course for these learners, it might be useful to consider the above-mentioned peculiarities in relation to the following elements: syllabus design, language teaching approaches and methods, language teaching techniques.

3.1. Syllabus design

Guidelines for the design of language syllabuses can be found in the *Common European Framework of Reference for Languages* (Council of Europe: 2001). The approach towards language adopted in this document is action-oriented, that is to say language is considered an activity in which each individual, viewed as a social agent, is engaged in order to carry out a task in different domains and contexts. Thus, the aim of a language course is primarily to help the learners to develop linguistic, sociolinguistic and pragmatic competences in relation to their needs and to the reasons why they take up a language course. Since for people over 60 the main reason is cultural, it is necessary to foresee the related domains (personal, public, occupational, educational) and contexts of use of language (places, institutions, people, objects, events, actions) our learners will deal with and make a list of the linguistic structures and words, of the functions and the socio-cultural knowledge and skills they will need to accomplish their tasks in these contexts. The skills to be developed will be the productive (speaking/writing) and receptive (listening/reading) ones, depending on the

learners' needs: e.g. reading skill for a passive language knowledge, oral reception and production for communicative interaction.

3.2. Language teaching approaches and methods

The previous outline showed that the elderly might have the following difficulties in language learning:

> a. Problems in the selective attention.

> b. Slowdown in the information processing and in the speed response.

> c. Decay of the fluid intelligence, which means problems in dealing with unfamiliar tasks and hesitation in answering for fear of making mistakes.

> d. Impairments in the sensory storage, in the episodic and the perspective memory.

When evaluating the most suitable teaching methods to employ, the teacher should consider their acceptability with regard to the elderly's peculiarities. In brief, the language teaching approaches, that generate different methods, can be divided into the following: structural, cognitive, affective/motivational, functional/communicative (Serra Borneto, 1998). Nowadays, the most common trend in language teaching is to use the so called "integrated" methods, that is to say methods that combine the basic principles of the communicative (functional-notional) approach with principles or suggestions from other methods, depending on the teaching goals and the teaching unit stage.

Considering the elderly's possible cognitive slowdown and psychological difficulties we might suggest more caution in using methods that demand inductive skills in the building of the rule system and too much personal and direct involvement in some class activities, such as role-play, games, etc.

Our teaching experience also suggests that methods that strongly involve oral-aural skills and offer linguistic input without a context, might not be suitable because they require an overuse of hearing, fluid intelligence and memory, abilities that might be damaged in the elderly. The affective methods, that lower the affective factors, usually a serious obstacle to learning for the elderly, and cognitive methods, that emphasize the meta-linguistic skill, seems to be more effective for the learning/teaching process involving aged people.

3.3. Language teaching techniques

The same remarks made as for the language teaching methods can be made with regard to the language teaching techniques. It can be stated that any language teaching technique can be used with the elderly but the teacher should evaluate its acceptability with regard to the elderly's peculiarities.

The more "familiar" language teaching techniques and related activities as transformation drills, filling in the blanks, answering questions, dictation, making a summary, writing a composition, multiple choice etc. will most likely not cause any psychological or cognitive problem.

On the other hand, activities as matching or jigsaw, odd man in/out, putting elements in order, cloze, information gap exercises, transcoding, roleplays might cause problems due either to the cognitive slowdown, or to psychological difficulties.

The possibility to employ any technique is justified by: the social context of the classroom/class group; the autonomy of the teacher in the teaching process; the feedback that might be obtained. In fact, it is interesting to remark how, with regard to the elderly, the learning process can also achieve, among the other goals, the opportunity to regain or improve some brain functions that with time are subject to decay, as proved by the "ACTIVE" research (Ball, 2002) in which people between 65 and 94 were involved in exercises related to daily life tasks and improved their memory and cognitive skills.

The typology of the exercises employed in this research is similar to that usually employed during the different stages of a foreign language teaching unit and the research proved the usefulness of these exercises.

4. Some suggestions with regard to the classroom, the teacher's behaviour and the teaching materials

4.1. Classroom

- Make sure there is a good and diffused lighting; aged people need it more than young people. Choose preferably lighting made from incandescent lamps and avoid the fluorescent ones (neon).

- Make sure there are no background noises.

- Take great care over the classroom disposition so that everyone can easily see both the teacher and the classmates; a circular arrangement, with the teacher moving around the classroom/sitting or standing appears to be the best.

- It is important to create a relaxing atmosphere in order to lower the influence of the affective filter that can be quite high in aged people.

4.2. Teacher's behaviour

The teacher plays a very important role in the learning/teaching process involving aged people (Knowles, 1973; Rogers, 1969). Therefore, we believe it might be useful to consider the following suggestions:

- Apply the principles of the collaborative language learning and teaching (Nunan, 1988).

- Give clear goals and motivate them; give clear operative instructions.

- Do not impose a too fast working pace and the carrying out of a task which is not welcomed.

- Help making the information fixing and recalling easier.

- Reduce stress.

- Refrain from speaking more than necessary in order to avoid unnecessary attention efforts.

- Speak with a normal voice tone (neither too low nor too loud). Refrain from articulating words too much, since it modifies the voice tone and the facial expressions. Speak within one-two meters from the learner. Avoid speaking too close or whispering in the ear because it prevents the learner from helping himself/herself with the teacher's facial expressions to understand the message.

- Always help the learner to understand the conversation topic.

- If necessary, repeat the information many times.

- Make the oral comprehension easier by giving the learners written suggestions related to the content of the proposed activity.

- Bring out the learners'personal experience, as suggested by the principles of andragogy (Knowles, 1973).

4.3. Teaching materials and use of technology

- Paper: choose materials printed in easy to read characters. Bear in mind that the elderly need a greater contrast between the object and its background to identify the object with precision

- Listening materials: use recordings with no background noises or overlapping voices. Voice tone and speaking speed should be normal.

- Use of videos: pay attention to sudden changes from darkness to light, that cause problems to the elderly. Either as a good teaching rule and due to

the perceptive difficulties that aged learners might have, it is important to show mainly short clips.

• Computer and language laboratory: consider whether the use of these media is accepted by the learners or whether they are worried to use technologies they are not familiar with. Possible resistances might be overcome by attempting to defuse their employment, reducing stress, allowing learners to work in pairs, and not demanding to carry out a task too quickly.

5. Conclusion

The potentially increasing number of people over 60 interested in learning a second language requires a close analysis of the elderly's learning abilities and needs and of the most suitable language teaching techniques.

This paper has tried to outline the elderly's age-related physical and psychological changes and to show how they could influence the language learning/teaching process. The framework we have tried to provide might be useful to increase the teacher's awareness of the peculiarities of these learners, to spur the offer of targeted second language courses and the publication of targeted teaching materials.

In our opinion such offer could contribute to create and support the elderly's motivation and interest in learning a second language.

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