

# Instructional Design: Considering the Cognitive Learning Needs of Older Adults

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## INTRODUCTION

Because of the growing number of older adults per total population, discussion has grown regarding the cognitive learning needs of older adults. In this article, I will look at what research has discovered and what actions have been taken in regard to meeting those needs. I also wanted to know whether instructional designers needed to consider those learning needs in their instructional design practices.

But why should instructional designers even consider the cognitive learning needs of older adults. Aren't these older adults past the point of learning or having the need to learn? Aren't they just going to retire, relax, travel, do hobbies, visit the grandchildren, and live off of their retirement income?

Maybe currently, or in the past, older adults would have gone about ageing this way, but we as a society are approaching a new phenomenon that we have not experienced before. Our society is ageing and ageing rather rapidly.

Why? Because the baby boomer generation is beginning to reach retirement age. Baby boomers are those adults born in large numbers after World War II, from about 1946 to 1964. Because of the approaching retirement of such a large number of these workers, there will begin to be a huge economic and social impact on our society. In the 1950s there were seven workers to support each retiree, but by 2030, there will be less than three workers to support each retiree. This will create a huge burden on our society that will require that older workers be kept in the workforce as long as possible to help meet not only their own needs, but the needs of others (Committee for Economic Development, 1999).

Because economically and socially it will be impossible for less than three workers to support one retiree, we have to make sure that older adults remain in the

workforce as productive contributors. Also, there will be so many baby boomers retiring that there will not be enough younger generation workers to take their place (Committee for Economic Development, 1999). These facts create an immediate need for instructional designers to begin considering older adults in educational and training instruction. Instructional designers must become more aware of ageing and the cognitive learning needs of older adults. Designers must understand these needs because they will become responsible for creating instruction for older adults to train and educate them to remain in the workforce.

Instructional designers also need to concern themselves with the learning needs of older adults because more and more older adults are remaining in the workforce and continuing to learn. Older adults therefore will need continued training and education on new technologies as they are developed and other issues as they arise in the workforce. Research is also beginning to suggest the importance of lifelong learning for one's own well-being (Cusack, Thompson, & Rogers, 2003, pp. 401-402).

## INSTRUCTIONAL DESIGN AND COGNITIVE LEARNING

If older adults are to continue to be a part of the workforce, they must continue to be educated and trained. Therefore instructional designers will have to develop instruction and training for older adult learners.

During the instructional design process the designer goes through three phases of instructional development: analysis, selecting strategy, and evaluating. During the analysis phase, the designer not only analyses the environment in which the instruction will take place, but also learns as much as he/she can about the learners receiving the instruction. The designer should seek

answers to such questions as: where will the training take place, how much time is available for the training, and what kinds of knowledge do the learners already possess (Smith & Ragan, 1999, pp. 5-6). Because the analysis phase of the instructional design process is so important in analyzing the learner, I wanted to spend the most time looking at this area as it relates to cognitive learning in older adults.

Cognitive learning theories dominate the instructional design practices of today. These theories place much more emphasis on the internal factors of the learner than on the external factors of their environment. "The learner is viewed as constructing meaning from instruction, rather than being a recipient of meaning residing alone within instruction" (Smith & Ragan, 1999, p. 20). Therefore, when considering the instruction of older adults, their cognitive learning abilities must be understood.

Cognitive psychology plays a very important role in the analysis phase of the instructional design process. The analysis phase places much more emphasis on prior learner knowledge and the organization of this knowledge, because the learner plays much more of a constructive role according to cognitive learning theories. Much more information is sought about the learners' ability to process information, their attitudes, motivation, and interests because these are strong factors influencing their learning (Smith & Ragan, 1999, p. 22). In understanding these factors, the instructional designer is much better prepared to meet the learning needs of older adults.

## **LEARNING NEEDS OF OLDER ADULTS**

One of the most important steps in analyzing the learner regarding factors affecting their cognitive learning is to determine what their learning needs are. Therefore, what are the learning needs of older adults?

In Purdie and Boulton-Lewis' (2003) study of the needs of older adults, they discovered that technical skills and knowledge, health and safety, leisure and entertainment, and life issues, in the order listed, were the main learning needs facing older adults. The most frequently mentioned technical skills were how to use a computer, how to operate an ATM, how to do phone banking, and how to use or program a stereo, VCR, or TV. These older adults also mentioned they would like to know how to use e-mail, a credit card, an answering

machine, and a microwave (Purdie & Boulton-Lewis, 2003, pp. 133-134). Older adults are faced with many technical needs that instruction and training could help alleviate.

Regarding health and safety, the Purdie and Boulton-Lewis (2003) study revealed that this older age group wanted to know how to manage their health problems, such as losing sight in one eye. They also wanted to know how to obtain information from their doctors regarding particular ailments they had. Sometimes they felt embarrassed because they did not understand what the doctor was telling them about a health problem and therefore did not ask questions (Purdie & Boulton-Lewis, 2003, pp. 134-135). They wanted to learn more about managing and understanding their own health and health-related matters.

In the area of leisure and entertainment, a variety of learning needs were identified by the older adults in the Purdie and Boulton-Lewis (2003) study. They wanted to learn things like how to garden, how to paint, and how to play a piano. Life issues that they need to know included how to keep their financial records and how to deal with the loss of a spouse (Purdie & Boulton-Lewis, 2003, p. 135). With such a broad base of educational and training needs, instructional designers should become very aware of the instructional requirements of older learners.

Maintaining an educated and skilled older workforce creates the same kinds of learning needs that younger workers have. Koopman-Boyden and MacDonald (2003) maintain that in order for us to maintain the older workforce in the future, we will need to invest in ensuring that older workers have the same opportunities for education and training that younger workers have. Older workers need to be challenged and given new roles just as the younger workers are (Koopman-Boyden & MacDonald, 2003, p.). Older workers must be kept in the workforce, they must be kept trained, and they must be treated as well as the younger workforce is treated.

## **BARRIERS TO COGNITIVE LEARNING IN OLDER ADULTS**

Just because the learning needs of older adults can be identified, does not necessarily mean these needs will be met or for that matter will even be considered. Older adults experience many barriers to learning as

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