

J. Leikas, P. Lampila. *Aging citizens' experiences of electronic brain games. Gerontechnology 2008; 7(2):150.* Although some studies have been carried out about brain training exercises<sup>1,2</sup> there is little proof that using tools like computer games or any other mental training devices could train our brain or delay the age related decline in cognitive abilities. Even so, electronic game producers have been active in designing special brain training software and computer games for aging persons who have not been too interested in computer games before. This paper describes user experiences of one of those commercial brain training games. **Methods** A brain training game was tested and discussed in four evaluation sessions with 16 aging participants (*Table 1*) and in a workshop with experts of cognitive sciences and interaction technologies. The object for the tests was a commercial Big Brain Academy (BBA) game, played with handheld Nintendo DS Lite console. The game concept consists of fifteen exercises in five categories: thinking, memorization, computation, analysis, and identification. Each test session lasted about 90 minutes and included playing the BBA-game, a questionnaire, and a semi-structured interview. The expert workshop followed the same procedure. The experts took also an extra four weeks period to play and assess the game themselves. **Results and discussion** All players became highly inspired in playing the game. The majority of the *aging players* (88%) were interested in following the improvement of their individual playing results. Most aging players also wanted to compare their results with others. Half of the players complained about the small size of the display, and half appreciated the stylus pen-based user interface. Although the threshold to try an electronic game can be high for some older people, our study proved that with an enjoyable application and an easy-to-use user interface it can be possible to interest also those aging people who have not played computer or video games before. *The experts* considered the game as a promising solution for activating aging people. In addition to traditional visual motor rapidity, the game seems to claim for other cognitive functions as well. However, it is impossible to assess the transfer influence of brain games into everyday life activities. Training such as short-term memory in a game does not necessarily have influence on the prospective memory in our daily activities. Nonetheless, there are obviously several elements in brain training games that make them worth playing. Developing these kinds of games for professional purposes (for instance, assessment and rehabilitation) requires validated empirical studies and cooperation between experts of human sciences and interaction technologies.

## References

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*Table 1 Gender and age of the participants in four evaluation sessions*

Group	Participants			Age [yrs]
	All	Female	Male	
1	4	3	1	62-72
2	5	3	2	49-68
3	3	3	0	51-56
4	4	0	4	48-63
Total	16	9	7	48-72