

## Title

# “Happy Sky”

## Keywords

Seniors - Video games - Human interaction - Computer

## Abstract

*The purpose of this study was to determine the Impact of the video game with couples composed of a senior (male) and a child, in order to know if old people can adopt it as part of their leisure activities.*

*Nine seniors and nine children of 8 years of age participated . They used the "Happy sky" video game to Kinect and the video behavior of the couple was recorded during the video game. Subsequently, a focal group was created with the participating seniors with the purpose of perceiving their experience, it was saved in audio.*

*The results of the focus group indicate that the senior show interest in knowing how to use the video game, as well as in the interaction that resulted from playing it in team and experienced a pleasant moment interacting with other people. It is concluded that the older adult can interact with video games and consider it as a more leisure activity, even when they have not had contact with this type of technology previously.*

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## Analysis

### THEORETICAL CONTEXT

Benefits of the use of technology and videogames for the older adults.

It is said that the use of the computer, the internet and the technology provide seniors with benefits. With these tools, no matter the physical space or time, the senior can be informed, buy, sell, perform procedures and carry out other activities despite having some type of disability that prevents movement.

With the computer, distance is not a problem, climatic changes or other inconveniences that are a result of the age.

The main barrier of technology is that by experiencing the decrease of their social relationships and the loss of physical mobility during the aging, many elderly people feel that they are unable to learn to use computers and the internet. But on the other hand some seniors have become fans of the video and computer games now provided by the manufacturers as healthy exercises for the brain. With based on growing scientific evidence, some types of videogames are increasingly seen as an exercise for the brain that can be especially useful for old people with risk of memory loss, dementia and visual problems .

Games help to concentrate and improve skills of memory, plus some studies show that such games can sharpen visual skills, their reaction speed, as well as improving skills as

cognitive functions, the speed of brain processing and memory. The use of these technologies is new, it is known that as the body can be exercised, the brain can be exercised, since it has plasticity, which can strengthen neurons and the circuits of the brain to recover functions.

Some limitations can be found. Some seniors have to deal with the digital division that exists, in addition to the generational gap in which they are. They themselves need, digital culture at all levels, that is to say that they need to be helped to not only to have access to technology but to know how to use it.

A study has been conducted to design guides to create digital games that promote significant leisure activities in seniors, and video games offer a therapeutic value as well as entertainment, they also allow the Virtual or physical socialization with other seniors or youth.

Video games can be used to reduce physical and intellectual deterioration in adults greater. It is interesting a study conducted to design video games for seniors. This study was conducted with several participants women and men, who answered about the activities of leisure in which they participated. As a result of these tests it was obtained that among the women participants the highest correlation was in "gardening" followed by "Activities of the church", "join the clubs of the third age ", " walk "and" read "and in the results of men the highest ratio is in the "reading", "listening to music or the radio ", followed by" watching television ", " talking to family members and friends ", " join the clubs of the third age "and" play with children". Among these various activities, it was determined that the most viable for the creation of a design were for the women gardening and for men playing with children.

## THE EXPERIMENT

The case study that was carried out consisted of 12 activities

1. Preparation of the material for the evaluation. This consisted on holding a meeting with those involved to organize the case study, where the objective was defined.
2. Design of the thematic guide of questions. They were defined. A series of questions to select in consensus with the working group the most suitable for the study.
3. Invitation of the participants. It consisted in inviting groups of older adults over 60 and children of 8 years old.
4. Preparation of the environment for the study. The room, in which the computer was installed with the software and the Kinect (2 days).
5. Presentation with the participants. The participants the intention of the study ,they were explained what would be their participation and the way it would take place (5 mins).
6. Request for demographic data. It consisted in requesting name, age and schooling (10 mins).
7. Presentation of the Happy Sky video game. The HappySky game aims at going through two levels. The first of wants to familiarize its user so that it feels comfortable with contact with the sensor allowing the player to move his/her character freely (in this case the kite / kite) with the movements of their hands. The second level is to work as a team so that both players use two networks which they must be positioned at the same time with a dragon

which has movements, in order to be captured it must be taken to a cage that appears upon completion of work in team. (10 mins)

8. Creation of game pairs. The children were asked to choose an older adult as a playmate (5 mins).

9. Training. A training of 5 minutes was carried out in average of the video game for each pair.

10. Use of the video game. The couples were asked to achieve the objectives of each video game. The video was recorded behavior of couples during their participation for the achievement of the videogame objectives.

11. Focus group. After having lived the experience with the video game, the discussion group was held with the older adult, in order to perceive their experience, which were recorded in audio.

12. Documentation

## CONCLUSION

One of the points that was observed in detail during the development of the study was how the elderly and children interacted and in turn how they got hooked, considering that they did not have much practice in these types of technologies. This was something that impacted the participants, in addition to generate a feeling of satisfaction.

When the case study was carried out, it could also be noted that seniors were more interested in learning about how to use the video game, as well as in the interaction resulted from the fact of playing it in a team.

The seniors showed a strong degree of enthusiasm living and interacting with others. On the other hand even if seniors did not have knowledge about playing with video game the experience produced excitement and interest to learn, overcoming their own fears to know things.

## Author

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## Links

[http://enc2014.cicese.mx/Memorias/paper\\_98.pdf](http://enc2014.cicese.mx/Memorias/paper_98.pdf)

## Title

# “Social robotics”

## Keywords

Seniors - Robot - Social robotics - Health

## Abstract

*The purpose of this study is to show the advantages social robotics can offer to senior to improve not only their physical well-being but also their mental health*

*The report presents some examples of social robots that have shown to be useful for that aim. It also gives information and the link to know about the advantages and benefits they can offer.*

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## What is social robotics?

Social Robotics is the study of robots that are able to interact and communicate among themselves, with humans, and with the environment, within the social and cultural structure attached to their roles.<sup>1</sup> Its function is clear: to create devices available to people to improve their lives, that is, their physical and mental health.

"We are moving from industrial robotics, which seeks to increase efficiency in manufacturing processes and productivity, to social robotics, aimed at increasing the well-being of people" says Juan Carlos Ramiro, director of accessibility at CENTAC.<sup>2</sup>

## The elderly and the use of new technologies

Half of the seniors between 65 to 74 use their mobile phones in their daily lives in Spain . In terms of Internet and computers, only 17 percent have used a PC (which does not mean that they know how to use it correctly or that own one) and 16 percent have used social networks, according to a survey by the Instituto Nacional de Estadística (INE).

<sup>1</sup> International Journal of Social Robotics, Springer

<sup>2</sup> La robótica social ayudará a personas mayores y con discapacidad a tener mayor autonomía | CENTRO NACIONAL DE TECNOLOGÍAS DE LA ACCESIBILIDAD. (2016). Retrieved from <http://www.centac.es/es/content/la-rob%C3%B3tica-social-ayudar%C3%A1-personas-mayores-y-con-discapacidad-tener-mayor-autonom%C3%AD>

## Examples of social robots

[RoboCoach](#) is a Japanese robot designed to encourage older people to exercise and not lose quality of life.

[GiraffPlus](#) is a robot in which the University of Málaga and the Andalusian Health Service have participated in its creation that keeps the elderly person connected with their family and doctor. Moreover, controls his/her health and gives a warning message if something is out of the ordinary.

[Paro](#) is a Japanese therapeutic robot in the shape of a seal that allows the documented benefits of animal therapy in environments such as hospitals and extended care facilities where live animals can not be introduced.

The [ACCOMPANY project](#), a prototype developed by the University of Hertfordshire in England, prevents the isolation felt by many elderly people. It offers motivating and stimulating activities for them. Thus, it improves the situation of people, encourages them to stay active and helps their ability to remember.

## Conclusion

Some service robots have been presented showing that this type of social robots are fit for different activities with the senior population

Social robots are perceived as able to accomplish multiple tasks,

Although there are concerns about the accomplishments of some activities

due to technical development and ethical aspects, this paper shows there is space for technology developments that can improve seniors quality of life

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## “Apps to exercise the mind of older people”

### Keywords

App - Elderly - Mental Agility - Smartphone - Tablet

### Abstract

*It is important for older people to have a good mental agility so that they can maintain their mental abilities. It is highly recommended to do concentration, deduction or visual perception exercises every day. Nowadays, thanks to smartphones and tablets it is possible to download some special apps aimed for these purposes and project them on their TV screen. This study presents examples of apps that have been shown to improve the memory of senior*

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Useful apps to exercise memory in seniors

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### Introduction

Research suggest that memory games improve cognitive skills but there is still a debate about which could be the exacts benefits some apps that offer games can offer and the type of games that are more effective . In spite of all it is true that games which help to improve the memory can be of great fun and may help to concentrate .

Here we present a list of apps that aim at exercising the memory and seniors and that are compatible with IOS and Android

### The Apps

1. **NeuroNation:** this app results in a brain training program designed by neuroscientists consisting of 23 exercises aimed at improving concentration, memory and intelligence. It also evaluates the potential and develops a customized training program for the person
2. **Fit Brains Trainer:** this app created by a team of neuroscientists includes more than 360 training sessions with which it is possible to test mental agility, concentration, memory, the capacity for deduction and visual perception through different games.
3. **Luminosity:** this app is created by neuroscientists and composed of more than 25 minigames and a daily training program. Luminosity evaluates mental agility to offer a personalized program oriented to develop 5 different areas of the mind: memory, attention, mental flexibility, speed of information processing and problem solving.

4. **Cognifit:** this app offers tools that researchers and health professionals can use in order to study and evaluate cognitive function in patients. Cognifit has a variety of games designed to train skills such as: short-term memory, planning, eye-hand coordination and auditory perception.
5. **Eidetic:** this app uses a technique called "spaced repetition" in order to help to memorize anything that can go from important phone numbers to interesting facts. It works differently from the rest of the apps, which contain usually general exercises, because it uses elements that have meaning and context for the person who is using it.
6. **Memory:** this app works like the classic memory game. It is full of very current iconographic elements.
7. **Elevate:** this app has more than 30 mini games designed in collaboration with experts in neuroscience and cognitive learning with which it is possible to improve the reading speed, concentration, memory and mathematical skills. Elevate increases the degree of difficulty of the exercises as the cognitive skills improve and also offers a detailed monitoring of the performance.
8. **4 pictures 1 word:** this app consists on identifying and writing down what four pictures have in common.
9. **Palabro and Classic Words Solo:** these apps consist on creating words from the letters that appear on the board. They work like the classical game Scrabble.

## Conclusion

It is important for everyone to train their brain and keep memory sharp and more for seniors who want to fight against memory loss problems that come with aging and age-related diseases

As we have seen there are plenty of apps that will help. Playing challenging games can help build new neural pathways in the brain and strengthen them

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