

## **Seniorgamer – seniors with dementia facing new technology and computergames**

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### **Abstract:**

*Seniorgamer is a way to engage elderly people facing new technologies with positive activity and computer games. We experience that computer games are very popular amongst children and young people in the library. Seniorgamer has shown that they are equally engaging for people with dementia. They provide both physical and mental activity, and they are great fun. This is especially important to persons with dementia. The library's expertise in combining culture, technology and health can also be useful for health care institutions and nursing homes.*

*Seniorgamer has established a model for how libraries can offer services to people with dementia and senior citizens in general. Based on computer games and modern technology the library's role as a meeting place and a resource center for health care institutions has been given a new dimension. The average age in the population is increasing and more people get dementia. The main target group of the project has been people with dementia who are still living at home, their relatives and employees in health care institutions.*

*People with cognitive impairment have certain difficulties using some computer games and game consoles. Seniorgamer has tested different kinds of game consoles and games. We have identified which ones that work best, as well as the best design for the library premises and surroundings. The necessary requirements and criteria for success are described in a Seniorgamer manual.*

*Seniorgamer has been an interdisciplinary collaboration. It has shown how the library can collaborate with health care institutions, private companies, municipality and academia.*

*Seniorgamer is established both in libraries and in nursing homes. It has become very popular.*

### **Keywords:**

Dementia, computer games, technology, senior citizens

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Activity, communication and joy are keywords for Seniorgamer. In Norway every fourth person will be a senior within the next twenty years. It is not only in Norway that people live longer. With an ageing population come some age-related challenges, like illness, risk of social isolation and loneliness. It is an increased use of technology in health care. This can be frightening for some of the elderly people. By introducing them to technology through gaming, we can make them more comfortable even with other kinds of technology.

Elderly people with dementia and cognitive impairment have been the main target group of the project. We have developed a way to use computer games providing physical activity in a social context. This has good impact on their physical as well as mental health. The response from the target group and health care professionals alike has been overwhelmingly positive. Experience with Seniorgamer has proven that elderly people both master and enjoy gaming. Computer games contribute to increased physical and mental activity. Furthermore, they help to fight social isolation and create positive moments in a safe and social environment.

### **Interdisciplinary project**

The library in Drammen has long and positive experience with the use of games and modern technology for young people. The main goal of Seniorgamer has been to see whether the elderly would also benefit from such games. To combine culture and health was an issue when the public library in Drammen planned for the project. This led to an interdisciplinary collaboration with partners who have expertise in health science, technology and innovation in partnership with health institutions in Drammen municipality. With various professional backgrounds and different approaches to the issues of activity, aging, dementia and health, this collaboration has led to an exciting, creative and innovative project.

Representatives from the target group, their relatives and participants in our local society has been involved in surveying, testing and facilitating Seniorgamer under the guidance of health professionals in Drammen municipality.

### **Dementia**

To facilitate the library as a good meeting-place for persons with dementia, it is necessary to know something about the challenges they meet. Dementia is a brain disease. Because of this some of their everyday life and activities has become difficult to conduct. Some of the symptoms are mood changes, disorientation, anxiety, social withdrawal. Noises can be frightening. The eyesight deteriorates. Because dementia affects the visual impressions it is necessary to consider the signs and colors. Blue is a very good color.

### **Prejudice towards computer games**

When they are introduced to the idea of playing computer games, elderly people often have prejudices: "This is for the children. It is all about shooting." They need to see what kind of games we use and be comfortable with the idea before they want to play. In this project we have tested different game consoles and games. People with cognitive impairment may experience problems using some game consoles. It can be difficult for them to let go of the console after finishing the game. Games based on a motion sensor solve this problem. These games are operated by the use of hand and body movements only. To participate the gamers are 'forced' to both engage in physical activity and concentrate, in a way that isn't perceived as tiring. It is necessary to choose games without too many effects and speed. In all the games we have tested we have found that bowling is a winner.

### **Gaming in the library**

To establish contact with people with dementia who are living at home, we collaborate with health care in the municipality. People with dementia often come to the library in groups. They perceive the

library as a safe haven, free from focus on disease. We provide the target group with a joyful and positive activity. To be able to do this the library needs to be facilitated and the employees needs some basic knowledge of dementia. We need to choose a place for gaming with as little noise as possible. Or choose a time of day when the library is quiet.

The library's central position in the community makes it a good base for Seniorgamer. Here everyone meets, young and old. The library's role as a meeting place is unique.

### **Gaming in institutions for elderly people**

Seniorgamer has collaborated with many residential and service centers and helped them in establishing gaming activity. The target group has been eager to participate, which has been a great inspiration to us. The feedback and response from employees in the nursing homes has been a good help in facilitating this project. Seniorgaming has proven to be fun not only to the seniors but also for the employees. Their response has shown that this is not only a good activity because it is fun. It also provides activity and training. Because the seniors want to join the game, they are willing to leave their crutches and walkers.

### **Volunteers**

Cooperation with volunteers is important. Their positive attitude helps provide good meetings. They make people feel welcome, they pour coffee, they take part in the conversation and they join the game.

### **Ethics**

The Seniorgamerproject has experienced much attention from the media. Considering the challenges people with dementia experience, they need to be shielded. It has been necessary to do some ethical considerations. Therefore we use volunteers in most of our photographs and visual documentation.

### **The library as a resource center**

The library's many qualities shows clearly in Seniorgamer. Not only do we provide a meeting place that is facilitated. We establish the library as a resource center in the municipality for the nursing homes and health care. We have learned about dementia from them and we have taught them how to use computer games as a good activity for their residents. As a consequence we have a closer collaboration and sometimes they now invite seniors to the library for meetings and events.

### **Health information**

The library can provide good and relevant information about health issues. People who get the diagnosis dementia and their relatives are eager to know more about the disease. The library provides information that is especially adapted for the target group. Some of the books meant for health professionals can be experienced as frightening. Therefore it is important that we give appropriate information that is right for non-professionals. The library also has events and lectures that provide solid information for seniors. It is equally important that we do not forget to focus on the bright sides of life.

### **A national model**

Libraries can be very different in terms of the premises, the number of employees and the size of their budgets. To establish a national model for Seniorgamer, we collaborated with a small library, Risør Bibliotek, and a library in one of our largest cities, Bergen Offentlige Bibliotek. Drammensbiblioteket is a medium size library. We find that Seniorgamer can easily be established in all kinds of libraries. The games and game consoles are not very expensive. It is possible to use the same game consoles

that are used by the children at another time of the day. In a large library the senior gamers can have their own space and game consoles. If you want to start senior gaming it is necessary to consider the possibilities in your library and how your premises can be facilitated. It is also necessary to have dedicated employees. They must connect with the local organizations for volunteers and health care professionals in their municipality. In our experience this secures that Seniorgamer becomes a positive and lasting activity.

### **Golden moments**

People with dementia experience many losses; loss of functions and not being able to care for themselves any longer. Social isolation and loneliness are often consequences. When they meet other Senior gamers, they can forget about the things that are difficult. Our experience is that computer games are equally attractive to both men and women. When they meet and laugh, it makes it easier to share the difficulties they experience in their everyday life.

We have experienced that even people who suffer from a severe degree of dementia have learned to play and they get many “strikes”. This sense of mastery and pleasure creates golden moments that last. Some of our gamers has even bought game consoles themselves and are very proud to teach their grandchildren to play.

Seniorgamer is an activity that is especially suited for people with dementia, which can easily be adapted to other groups.

Seniorgamer is a project of Drammen Library. It started with a preliminary project in 2011 followed by a three-year main project. It is now closed. The Seniorgaming continues as a regular activity in the library.

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