Makerspaces at the City Libraries
Collaborative work sites in Espoo (Finland)

City: Espoo
Country: Finland
Number of inhabitants: 275,000
Topics: science and technology, civics, culture and leisure, personal development, lifelong learning, information and documentation, educational system.
Principles of the Charter of Educating Cities: 1, 3, 5, 10, 14, 19

Makerspaces (also known as spaces of creation) are collaborative work sites where people of different ages and interests help each other by sharing the facilities and tools, as well as knowledge, experience and ideas. The activities that are carried out in these spaces generally are related to electronics, robotics, IT, 3D printing, etc., but also to electricity, carpentry or crafts. They are an ideal place for students, amateurs, artists, craftspeople, repairmen, inventors and all people who need well-equipped facilities or who want to experiment with different work tools, and especially, where they can develop synergies.

Makerspaces can be located in different spots in the city, but normally they are found in libraries since these are places that function more and more as training and creative spaces.

In 2013 the City Council of Espoo started up the first makerspace at the Tapiola Municipal Library, as an opportunity to promote peer-to-peer learning and practice-based learning, as well as coexistence and socialization. At this time 6 libraries in the city have a makerspace. These services are free of charge and the City Council provides the economic resources for their operations: the facilities and the tools, although some materials also come from donations.
Objectives

- To foster equality of learning opportunities.
- To foster socialisation, the exchange of resources, and working together.
- To stimulate design and creativity.
- To help the users to get up to date with new trends in different areas of knowledge.

Methodology

Most of the makerspaces in Espoo have the same opening hours as the libraries. Generally the users are people of all ages. In the mornings there are visitors from schools as well as the elderly who ask for help with their computers or mobile phones. In the afternoon most of the visitors are people who are working on a personal project. All these people, in addition to sharing the space and tools, help each other, which encourages the generation of new ideas.

At the makerspaces, the users, as well as using classical tools, such as hammers, vices, saws, drills, etc., also have a chance to use digital tools to print in 3D, cut vinyl's, program computers, etc. As well as the basic services, some makerspaces have specialized in a specific activity (crafts, graphic design and music) in response to the demand of our users. Also if a user is skilled in a specific activity he/she can suggest creating a club. Clubs have been organized around programming, electronics, 3D printing, etc.

A monitor is in charge of running the spaces. The candidates for becoming a makerspace monitor first work at one of the spaces for a week and if they decide to continue, they must undergo specific training. Normally the candidates are municipal workers or young people who are learning a profession. The monitors play an important role, but the really important thing is that the users learn from each other.

The publicity for the initiative is done through local periodicals and also through libraries’ websites and social networks.
Espoo has a population of 275,000 inhabitants and is expected to grow by 24% over the next 20 years. Espoo is a demographically young city, 20% of the population is under 15 and 47% is under 34.

It is the second largest city and the fastest growing in Finland. Espoo society is more and more prosperous and is becoming a modern expanding metropolis with good transportation links; it is also building a solid international reputation for itself.

Some of the most renowned centres and companies related to the knowledge economy are found in Espoo: the University of Aalto, the Nokia telephony company and video-game companies such as Remedy and Rovio. Moreover, the largest innovation hub in northern Europe is in Espoo: the Espoo Innovation Garden, an eco-system devoted to science and technology, business, the arts and sport.

The response to the new initiative has been very positive on the part of the users and others involved, as well as on the part of library staff.

An ongoing evaluation is made in order to adjust the service to the demands and needs of the users.

**Strengths:**
- New technologies and globalization are offering the use of the makerspaces a wide range of opportunities for them to create communities, collaborate, and share knowledge.
- The users do not need to buy the tools needed for their activities.

**Future proposals:**
- To increase the resources for these facilities in order for user satisfaction with the service to grow.
- To create incipient companies at the makerspaces and get other companies to support these services.
- To provide larger spaces for this activity.
- To seek synergies with the educational community (primary and secondary schools and university).

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