LEARNING WITH A NEWBORN BEE – DESIGN AND DEVELOPMENT OF A VIDEOGAME

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Abstract:

In Europe, there are several challenges for beekeeping, such as low level of professionalism and the general public unfamiliarity with bees. Given the importance of beekeeping for rural development and of bees themselves for the preservation of biodiversity and the sustainability of the planet, knowledge promotion about bees and beekeeping is of utmost importance. The project “beeB – Foster for beekeeping bridges through innovative and participative training” (2019-1-PT01-KA202-60782) was developed with the contribution of six countries (Portugal, Spain, Italy, Croatia, Norway, and Estonia) and created tools to allow family beekeepers, or any other non-professional beekeepers, to acquire skills in this area by using innovative and adaptive forms of training that are based on ecological and good practices. The project also set out to create innovative ways of disseminating knowledge associated with the world of bees and its wonders, raising a general interest that might contribute to value the beekeeping sector and to stimulate novel beekeeping pathways.

One of the outputs of the project was Ba-Bee-Bee, a videogame that develops as an interactive narrative. The plot is based on the discoveries of a newborn bee inside the hive. The bee can move through scenarios and trigger conversations with other characters. Along the dialogues, when some key concepts are introduced, the game unlocks collectible cards that can be revisited at any moment via the game inventory. In the back of each card, players can find a short paragraph systematizing or adding some more information on the topic. Players can roam freely through the world game, making it possible to repeat interactions and unlock cards that they might have missed. The game runs in desktop computers and mobile devices. All the text presented, in the dialogues, cards, and interface was localized for the partner languages.

The process of developing the game was a combination between game design decisions and integration of scientific knowledge targeting the intended public. It implied to distil pieces of information about bees and beehives and translate them into a narrative that led the game environment, the plot and character actions, and the gameplay itself. Developing games that promote learning but are not strictly didactical is a challenge for interdisciplinary teams. The paper intends to contribute with the analysis of the experience of Ba-Bee-Bee, starting with the description of its design and development, followed by a critical discussion of the solutions found for combining playfulness, flow, and learning.

Keywords:

Videogame, videogame design, interactive narrative, beekeeping, bees.