

# Game Design Workshops for Children Using a Software for a Learning by Experiencing Approach

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## **ABSTRACT**

In Japan, becoming a "Game developer" has been ranked as one of the top career choices among primary school students in recent years. However, despite its rank, there are few places for primary students to actually experience what it would be like to work in the profession. When learning programming, there are great tool such as "Scratch", but concerning game design learning, there are not that many to choose from.

We created "Adventure Creator", a software for learning by experiencing the creation of game design aimed for children. Existing game production experience software is limited to stage editors where blocks and enemies can be arranged freely, it is inadequate as a full game design experience. Using "Adventure Creator", experiences of "Arrangement of blocks and enemies", "Changing of sounds, effects and parameters can be made by visually arrangement. By experiencing game design the children can learn how the arrangement of blocks and enemies and how changing sounds, effects and parameters can make the game more fun.

In order to evaluate the usefulness of the workshops and software, we distributed questionnaire surveys, which were completed by participating children and visiting parents. 74 children and 45 parents participated in the survey.

The results showed that more than 90% of the children found that "Goal effects can make the game more fun", "Sound can makes the game more fun", and "Changing moving speed etc. can make the game more fun". In addition, more than 80% of parents answered "I enjoyed watching the children having fun while learning using 'Adventure Creator'". It was shown that game design workshop experience using our software was an effective tool for children to learn about the different effects of game design elements.

As a future plan, we will continue to conduction workshops using "Adventure Creator", and also work for giving the chance for more children to gaining the experience by releasing the software on the internet. We want to increase the number of future game designers.

## **Keywords**

Game Developer, Game Design, Experience Learning Software for Children, Workshop

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