

Twitter, Robotics and Kindergarten

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Abstract. In this work, an experience of using Robotics in a Kindergarten is described. Moreover, the use of Twitter as an important and powerful communication tool is exemplified. In the context of this robotic experience, Twitter was used not only to prepare the children for the experience or to disseminate the activity but also to provide and share feedback given by the kids to the robotic expert that brought Robotics into the classroom and to the general public. Follow up activities related to the original experience are also reported.

Keywords: twitter, robotics, kindergarten

1 Introduction

The use of robotics with children since an early age is common nowadays. Everyday, the limits are being pushed and robotics is introduced to younger and younger kids. In this work, an experience made at the Colégio de Alfragide with 4 years old children (some still aged 3) is reported. Twitter as a way of motivating the children for the experience, disseminating the activity to the general public and providing feedback and interaction among the children and the robotics expert is also described. This classroom has daily experience with Twitter and that experience is described in [1].

A whole work of motivation and preparation was conducted by the educator telling the kids about a surprise to be made by someone that lived abroad. The children interacted through Twitter with the robotics expert asking about this surprise (and other simple questions) and this was important to prepare them to the day of the experience. Every child was curious to see what was the surprise and that contributed to the success of the initiative.

2 Experience

The children were divided in small groups with 3/4 kids per PC and the experience took around 50min for each half of the class. First, the WeDo software from LEGO was used to show what we would build (in this case a lion) and then the same software give step-by-step instructions. One of the kids (in a group) was sitting at the PC and clicking the mouse to go further while the other two searched and mounted the pieces rotating roles sometimes. In the end, the robotics expert programmed the robot and the small lion made the basic movements of rising up and down while roaring and groaning (with each movement respectively). Several things could be observed. In many cases, the girls were faster to find and mount the pieces although they had more difficulty than the boys in putting the pieces together (due to lack of physical strength). In the end the kids touched the lion and lost their initial fear. This is an important achievement as children should lose their fear of interacting with technology and machines. This interaction and their awareness about the lion not being real but only a toy/machine that could not provoke any harm prove the importance of this kind of experiences in contributing to a technological education. Figure 1 shows the building of the robot and the final interaction with the lion.



Fig. 1. Building and interacting with the robot.

3 Follow up activities

After the experience took place, several related activities followed it. First of all, as used previously, Twitter was an important tool to disseminate the work by publicizing photos of the activities, getting public comments about the experience and even finding other educators interested in repeating this kind of experience. Moreover, Twitter allowed the educator to provide public feedback between the kids and the robotics expert. More important, in the context of the "Hospital Friends" project, an example of creative robotics was put in practice. Robotic-like faces to be used as badges were built by the kindergarten children and sent to the pediatric hospital D. Estefânia. Finally, with the support of the parents, recyclable materials were used to build real size models of robots. These models were used by the children during their annual parade. An example of one of these suits is shown in Figure 2.



Fig. 2. One of the robotic suits used by the children.

4 Conclusions

This article presented an experience of introducing Robotics in a kindergarten classroom to very young children. This group of kids had already some experience with technology and computers but the novelty of the experience pleased them and was important to make certain fears disappear. The feedback provided at that time and later through Twitter gave us a good insight about their reaction and willingness to use technology. There are plans to perform this kind of experience in a regular basis. The authors would like to thank Joana Sousa for the kind support during the experience and for the photographs.

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 Integrating Robotics in School Curriculum
 Riva del Garda (Trento, Italy) April 20, 2012
 ISBN 978-88-95872-05-6
 pp. 194-195