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English Editing & Translation

Sample of English Rewrite

Topic: Robotics

Using robots in play-based learning for engineering education of exceptional students

SPECIAL-NEEDS STUDENTS, ROBOTICS, LEARNING PERFORMANCE, LEGO, ENGINEERING EDUCATION, LEARNING-THROUGH-PLAY

Technological applications are proliferating at an exponential rate in the modern world, and the development of effective processes for learning about technology deserves serious attention and inquiry. ~~On the other hand, learning of technology should be paid more attention while technological applications are more wild spread than ever.~~ In the traditional education environment, ~~people~~ educators typically focus~~emphasize~~ heavily ~~much more~~ on theoretical learning and on developing the ability to perform standard ~~framing~~ operational procedures. They typically focus far ~~and have~~ less on developing sound engineering thinking and innovative ways to promote learning. And in an effort to make science popular and accessible, science educators often present demonstrations which are intended to engender a sense of fun in the students, rather than to make a serious scientific point or to promote sound scientific inquiry. ~~most science popular demonstrations focus on the sake of fun, s~~So the ~~present study~~Edison Robot Camp was designed ~~–~~with the intention to add some balance to this situation. ~~would like to solve the above situations.~~ One of the important instructional tools used at the camp was Mindstorms NXT robot modules, a product of the ~~Therefore, The use of~~ Lego~~o~~EGO company. ~~introduced Mindstroms NXT~~ The robot modules ~~are~~ were used with the intention that the ~~for~~ children ~~to foster~~might use their creativity, have an opportunity to assemble a variety of components by themselves and develop a first-hand understanding of the function of motors and sensors. Children were given the task of ~~Finally they can~~ building ~~up~~ their own robots and controlling them by using the Visual Programming Language of Microsoft Robotics Developer Studio platform. By engaging in these activities, c~~C~~hildren had the opportunity to ~~can~~ learn basic simple programming logic and skills to control hardware (Okolo & Ferretti, 1998). By competing against each other with their robots in class, children were given the opportunity to~~will~~ modify their robots repeatedly to ~~win the race~~make them more competitive. Through the process of modification and improvement of their robots, the children had the opportunity to ~~and hence~~ improve their knowledge of how to problem solve and how to think as an engineer ~~learning performance~~ (Matarić, 2004; Murphy, 2001).

The target group ~~of the present study~~for the Edison Robot Camp included normal students and exceptional students (Wang , 2005). Among the exceptional group, there were~~,~~ ~~which includes~~students with high-functioning autism, attention deficit hyperactivity disorder and learning disabilities (Hung, 2003). The

forum for the learning experiences was the~~is~~ Edison R~~r~~obot~~ic~~ C~~c~~amp, which was held in July to August, 2009, in connection with~~at~~ the science class of Agape Community Center, Wenshan District in Taipei City.

The primary goal of the ~~present study~~camp wa~~i~~s to formulate an effective, ~~provide a~~ normal, non-separated education environment for exceptional students. ~~For this reason~~One of the steps taken to achieve this goal was to invite~~,~~ several special education practitioners ~~were invited~~ to propose a range of appropriate and effective learning environments for special needs children. Out of these discussions came the decision ~~diseuss the solution and decided~~ to hold a~~this~~ robotic camp within the context of~~in~~ an inclusive education methodology. It was postulated that this approach would both enhance the chances for special needs c~~C~~hildren to utilize their special learning talents a~~could benefit from this kind of inclusive education methodology a~~nd to establish new social relationships. The ~~authors~~ camp designers expected that the children would extend ~~can increase~~ their interests in~~with~~ learning science ~~and~~ through working with the technology of robots. It was also expected that the children would improve their~~,~~ scientific understanding and their thinking ability. ~~, a~~And it was expected that w~~W~~ith hands-on assembly of robots, the children would improve ~~to strengthen~~ their hand-eye coordination. It was anticipated that by having the children work with a number of resources, the camp designers would be able to identify the resources and robotic activities which proved most appropriate and effective and subsequently make them available to the wider school community.~~providing them various kind of resources, in .and look forward to the provision of school learning resources, which means robotics activities in the present study.~~

II. Course Objectives

Unlike ~~ordinary~~ conventional robot camps, this camp was designed with hands-on robotic activities which were intended to provide opportunities for~~focused on the observation that~~ exceptional students to develop ~~could enhance~~ their interpersonal relationships, their skills in teamwork, and their abilities in~~y of~~ emotional management ~~through hands-on robotics activities~~. The benefits which the camp designers intended for ~~that~~ this camp to provide ~~was expect~~ for the special needs~~se~~ students were~~are as follows~~:

1. C~~Let c~~hildren would extend their understanding of the principles of how to design ~~a~~ robots and~~,~~ how to use components such as motors and sensors to complete ~~the~~ assigned tasks. To this end, a~~A~~ll students were~~are~~ expected to apply what they had~~ve~~ learned ~~after the end of the course~~ and go on to~~can~~ create an automated robot within a time limit.