

互動繪本創作結合電子感測裝置之研究

摘要

本研究根據繪本發展、兒童認知、互動感測技術的相關文獻，提出繪本與互動感測裝置創新結合與創作發展的特性假說，依繪本故事內容情節需求，導入適用的感測器，並應用「Arduino」以進行控制整合，以強化故事情境的營造。研究者透過實際創作《獅子先生的頭髮》之電子感測互動繪本，以觀察記錄與問卷調查方式分析、驗證本研究之互動繪本創作的特性及其價值。《獅子先生的頭髮》以擬人化手法設計故事角色及繪本內容，故事內容述說一位頭髮又短又少的獅子先生，因常受同伴的嘲笑與欺負，變得沮喪而失去自信，因此為了擺脫同伴的欺負，他決定展開尋找新頭髮的旅程。

本研究之電子感測互動繪本與一般電子互動繪本的形式有所差異，其互動模式為：藉由閱讀者與實體玩偶的互動以產生故事回饋，而非僅以滑鼠鍵盤的形式進行遊戲。研究成果發現，應用電子感測裝置於互動式兒童繪本的手法，能貼近使用者體驗、達到直覺互動，更能滿足兒童直覺操作的需求及引起兒童閱讀的興趣，為兒童帶來有別以往的閱聽感受。並以本研究之設計實務，提出建議與結論，以為互動繪本之整合應用參考。

關鍵字：互動、繪本、感測裝置、「Arduino」

The Investigation of Applying Electronic Sensor Device to Create the Interactive Picture Book

Abstract

This research aims to address the new concept of integrating the picture books and interactive electronic sensor into the creation of interactive picture book, according to literature review of the development of picture book, children's cognitive psychology and interactive sensor technology. To strengthen the creation of the context of the story plot utilizes the suitable sensor, and applying the control device “「 Arduino 」” into the creation project. This research project drafts a hypothesis of characteristic in interactive picture book “The Hair of Mr. lion” in practice, through observation, record and questionnaires to analyze, then test the characteristic and verify the value of this creation project. In this creative story “The Hair of Mr. lion” designed the character and story through the method of anthropomorphic. The story is talked about a depressed lion who wanted to start the journey because he was laughed by his mates due to his short and rare hair.

The interactive mode of this creation project is interacting with the story feedback through entity doll, which is different from general electronic interactive picture books which interact by keyboard or computer mouse. The research result shows that applying the electronic sensor in interactive picture book could access to user's experience and intuitive interaction. It would also access to children's intuitive operation and inspire children's reading interest. Finally, the satisfied questionnaire data display the good response and evaluation in this interactive picture book creation. The recommendations and conclusions are made as references for the design of interactive picture.

Keywords: 「 Arduino 」 , Interactive, Picture Book, Sensor