

Article

Chatbot, as Educational and Inclusive Tool for People with Intellectual Disabilities

Montserrat Mateos-Sanchez ^{1,*}, Amparo Casado Melo ², Laura Sánchez Blanco ²
and Ana M. Feroso García ¹

¹ Faculty of Computer Sciences, Pontifical University of Salamanca, 37002 Salamanca, Spain; afermosoga@upsa.es

² Faculty of Education, Pontifical University of Salamanca, 37007 Salamanca, Spain; acasadome@upsa.es (A.C.M.); lsanchezbl@upsa.es (L.S.B.)

* Correspondence: mmateossa@upsa.es

Abstract: In the current health crisis due to COVID-19, people with intellectual disabilities have especially suffered. The development of their social abilities has been restricted, first with the lockdown and then with the current limitation of social life. They have lost some of these abilities or are having difficulty practicing them. CapacitaBOT, our use case, is a mobile application based on a chatbot, which allows people with intellectual disabilities to work and train their social skills. A chatbot is a software tool that allows to maintain a conversation in automatic way between the user and the machine, the mobile application. CapacitaBOT can be considered by its features, an educational ICT tool that introduces innovation, inclusion and quality in order to be integrated into education for people with intellectual disabilities. The tool trains these people for real-life situations and can also be considered a resource that allows the application of active methodologies since it makes easy the learning of social skills. In addition, all the contributions of the tool are aligned with the objectives of sustainable development because it is a tool that facilities the accessibility of people with disabilities, who more than ever have been affected by social isolation caused by the COVID-19 crisis.

Keywords: chatbot; mobile application; social abilities; inclusive education; intellectual disabilities; educational innovation; COVID-19



Citation: Mateos-Sanchez, M.; Melo, A.C.; Blanco, L.S.; García, A.M.F. Chatbot, as Educational and Inclusive Tool for People with Intellectual Disabilities. *Sustainability* **2022**, *14*, 1520. <https://doi.org/10.3390/su14031520>

Academic Editors: José Antonio Marín-Marín, Santiago Alonso-García and Fernando José Sadio Ramos

Received: 2 December 2021

Accepted: 22 December 2021

Published: 28 January 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

As a result of the current health crisis, lockdown and subsequent de-escalation, people with disabilities have seen their social relations restricted, causing them to lose previously acquired social skills or to have more difficulties in putting them to use again.

During this period, people with disabilities who have had digital tools, mobile phones with applications, tablets or computers have been more connected than people who did not have these resources. For this reason, a technological tool has been developed based on the conversational bot that facilitates universal accessibility and allows the development of the social skills of people with intellectual disabilities, so that, they can lead a full life as normal as possible under the principle of inclusion.

People with intellectual disabilities meet communication, accessibility, cognitive and sensory barriers that complicate their access and participation in community services, accentuated by the current situation where contacts and opportunities to implement social skills in contexts other than the family are limited. Historically, people with intellectual disabilities faced barriers that complicated their access to participation in community services because of their difficulties in developing social skills. With regulatory changes and awareness campaigns, a more committed, inclusive and innovative society is being built, although there are still progress to be made, which can be strengthened with new methodologies and the use of innovative resources that improve the daily life of people with disabilities.