

# Chapter 34

## Empowering Citizens Through Virtual and Alternate Reality

**Vanessa Camilleri**

*University of Malta, Malta*

**Alexiei Dingli**

*University of Malta, Malta*

**Matthew Montebello**

*University of Malta, Malta*

### ABSTRACT

*2016 is the year when virtual and augmented reality takes a boost. We've already seen various Virtual reality (VR) headsets being released and Microsoft new HoloLens is finally being realised thus paving the way for Augmented Realities (AR). In this chapter, we will explore further the use of VR in two particular domains in which governments are facing difficulties. The first topic is related to disorders and in the second domain we will consider migration. We will do this by creating new VR experiences, which present to the users alternative realities. The context we will be looking at is that of teacher training. As teachers they cannot fully comprehend what an autistic child or a child migrant experiences simply because they haven't lived through that experience themselves. Thus we have created an innovative inter-faculty collaboration at the University of Malta aimed at addressing this challenge. Previous studies into the importance of VR for teaching and learning, have described the ways in which people immersed in this alternative reality have been affected.*

### INTRODUCTION

The world of today is very different to that of a few decades ago before digital natives and immigrants roamed the physical earth (Seychell, 2015). This is also the year when virtual reality (VR) will finally experience a massive growth in the industry both because of gaming but also due to other reasons. As the name implies, virtual reality is a type of emulation of the real world making the users experience reality in an alternative way. Large companies such as Facebook and Google are investing heavily in this

DOI: 10.4018/978-1-5225-5469-1.ch034

## ***Empowering Citizens Through Virtual and Alternate Reality***

technology, some of them even providing low entry cost such as a smartphone and a low cost cardboard for the underlying technologies (for example Google Cardboard). The power behind VR is still relatively unknown, yet initial experiments conducted by Nonny de la Peña in 2011, on Virtual journalism shows the immense effect which such a technology can have on people. In one instance, the VR experience simulated a person falling to the ground due to a heart failure. Real users immersed in this alternate reality were seen crying and obviously in distress, even though they knew that their experience was just an illusion created by a machine.

In this chapter, we intend to explore further the use of VR in two particular domains in which governments are facing difficulties. These challenges are the result of disengagement within the communities, who choose to cast out other members which they feel are different from them for a number of reasons. We believe that such disengagement hinders the democratic process within a society, as citizens turn towards non-participation, leaving policy making in the hands of one or a few people who will be at liberty to manipulate such policies driven by personal agendas. We also believe that although the reasons for such community disengagement may vary depending on contexts and situations, there is one common factor that may help identify with the person/s who are being considered as different. This common factor is embodied in empathy, developed through emotional intelligence.

Presently we are seeing a number of crises that have been challenging governments and policymakers in the education sector. One such crisis sees the management of disorders in classrooms and schools. Governments are spending millions of Euros every year in order to support teachers in dealing with disorders such as those on the autism spectrum in the best possible way thus helping those suffering from these disorders. The number of children diagnosed with autism or related disorders has grown at what many may call an alarming rate. In the 1970s and 1980s, about one out of every 2,000 children was diagnosed with autism whereas today it is estimated that one in 150 8-year-olds in the U.S. lies on the autism spectrum disorder. The problem is especially highlighted when in the classroom teachers report not being able to understand what goes on with an autistic child. Autism is a pervasive developmental disorder that involves abnormal development and function of the brain. People with autism show decreased social communication skills and restricted or repetitive patterns of behaviours or interests. This condition is well studied even though to date there is no cure. The inability to understand what an autistic child may be going through at any given moment may result in an inevitable choice of leaving the sole responsibility of the child to the learning support assistant. Such exclusion leads to teachers moving away from finding alternative solutions to the correct integration of people suffering with such disorders, in the classroom.

Integration is also the factor that is common to the second challenge which we consider in our project. We believe that the other crisis which is a common factor across many European countries is migration. Migration is not only a humanitarian crisis for many European governments but more of a political one. Most governments have the desire to help these migrants however they lack the political will essentially because a substantial chunk of the electorate is against it. Teachers in the classrooms are faced with attempting to integrate migrants, without being equipped with the skills to do so. One such skill is related to the development of empathy as part of emotional intelligence.

Within this chapter we outline the works-in-progress of a project that is being undertaken at the University of Malta in which we are developing applications capable of reversing this trend by getting people to empathise with authentic conviction with learners who are on the autism spectrum as well as

11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/empowering-citizens-through-virtual-and-alternate-reality/199712](http://www.igi-global.com/chapter/empowering-citizens-through-virtual-and-alternate-reality/199712)

## Related Content

---

### Evaluating Computer Games for the Professional Development of Teachers: The Case of Atlantis Remixed

Hakan Tüzün, Tansel Tepe, Tülay Dargut Güler, Fatih Özerand Volkan Uluçnar (2017). *International Journal of Virtual and Augmented Reality* (pp. 60-74).

[www.irma-international.org/article/evaluating-computer-games-for-the-professional-development-of-teachers/188481](http://www.irma-international.org/article/evaluating-computer-games-for-the-professional-development-of-teachers/188481)

### An Exploratory Study Examining Group Dynamics in a Hackathon

Alana Pulayand Tataleni I. Asino (2019). *International Journal of Virtual and Augmented Reality* (pp. 1-10).

[www.irma-international.org/article/an-exploratory-study-examining-group-dynamics-in-a-hackathon/239894](http://www.irma-international.org/article/an-exploratory-study-examining-group-dynamics-in-a-hackathon/239894)

### Augmented Reality as a Tool to Enhance the Experiential Value of Online Shopping: The Future of Fashion Retailing

Tuçe Ozansoy Çadrcand irin Gizem Köse (2018). *Virtual and Augmented Reality: Concepts, Methodologies, Tools, and Applications* (pp. 850-874).

[www.irma-international.org/chapter/augmented-reality-as-a-tool-to-enhance-the-experiential-value-of-online-shopping/199719](http://www.irma-international.org/chapter/augmented-reality-as-a-tool-to-enhance-the-experiential-value-of-online-shopping/199719)

### The Metaverse: Redefining Learning Spaces and Educational Experiences

Manpreet K. Riyat, Amit Kakkarand Ruchi Kakkar (2025). *Cases on Metaverse and Consumer Experiences* (pp. 51-86).

[www.irma-international.org/chapter/the-metaverse/371259](http://www.irma-international.org/chapter/the-metaverse/371259)

### Gendered Experiences of Mobile Gaming and Augmented Reality: Engagement with Pokémon Go among University Students

William Goette, Julie A. Delelloand Rochell R. McWhorter (2019). *International Journal of Virtual and Augmented Reality* (pp. 54-67).

[www.irma-international.org/article/gendered-experiences-of-mobile-gaming-and-augmented-reality/239898](http://www.irma-international.org/article/gendered-experiences-of-mobile-gaming-and-augmented-reality/239898)