Graduate Institute of International Development and Applied Economics

Edutainment and ICTs: towards a Fourth Generation of educational entertainment interventions

Andrea Carolina Echavarría Basy

Dissertation prepared in partial fulfilment of the requirements for the MSc. Communication for Innovation and Development

September 2016

Edutainment and ICTs: towards a Fourth Generation of educational entertainment interventions

Dedication

To my family and friends who supported me, my husband who followed me from the other side

of the world, and my mentors: Diego & Lucía, who believe in me and encourage me every day.

Acknowledgments

Contents

List of Charts

List of Figures and Images

Figures

Images

List of Tables

List of Text Boxes

Acronyms and abbreviations

AGESIC	Agency for Electronic Government and Information Society
CDCS	Communication for Development and Social Change
EE	Entertainment Education / Edutainment
GIT	Global Information Technology
ICTs	Information and Communications Technologies
INE	Statistics National Institute
MDGs	Millennium Development Goals
NGO	Non-Governmental Organisation
NRI	Networked Readiness Index
SDGs	Sustainable Development Goals
TV	Television
UGC	User-Generated Content
UIUP	Uruguayan Internet User Profile

Summary

Since the 1970s, Entertainment Education (hereafter EE) works in the production of contents to enhance audience's behaviour change. A balance between been educative and entertaining was needed to have people's attention and interest, to promote the change. After analysing most popular soap operas in Latin America, Miguel Sabido (2005) designed a methodology with positive and negative role models that audience could identify with them. However, his theory is criticised due to audience's behaviour change cannot be predicted as a result of following a soap opera as a passive receiver (Fuenzalida, 1996; Tufte, 2005).

Thomas Tufte (2005) identified three generations of EE interventions which evolved from the concept of 'lack of information' promoted by Shannon and Weaver linear communication theory, to the 'community involvement in participatory interventions', and the 'empowerment process' led by Freire liberalising thinking, accepting that people are not a passive receiver, but an actor who can identify the structural inequalities. Nevertheless, none of these generations takes into account the opportunities that new technologies and digital media provide expanding audience's experience. Current EE interventions such as Soul City (Soul City Institute for Social Justice, 2016), Shamba Shape Up (mediae, n.d.), Contracorriente (Puntos de Encuentro, n.d.) already include the use of Internet, social media and mobile telephony to enrich their main contents. Also, transmedia (Jenkins, 2006) is the phenomenon that happens when different medium converges in the creation of a new a story, and through transmedia storytelling (Jenkins, 2014) the audience becomes an active creator of the story instead of a passive receiver.

This dissertation would analyse the influence of the new technologies and transmedia strategies as a seed of the Fourth Generation of EE interventions. The methodology would include

literature review about edutainment and transmedia theories, complemented by data analysis regarding access and use of the new technologies. The Conceptual Framework would combine the analysis of transmedia storytelling, and new technologies with the new agenda of development settled by the Sustainable Development Goals (United Nations, 2015). The expected outcome of this framework is the characterisation of the Fourth Generation of EE interventions, according to Tufte's previous generations.

The main findings suggest that the process of producing an EE content is more important that the EE content itself. The information and communication technologies (ICTs) could expand the experience but excluding part of the population which is not user or not connected. Thus, a new generation of EE interventions should take advantage of the ICTs but through a participatory storytelling which includes the development of digital skills. Online/offline transmedia options could allow audiences participation, whether they have access to the Internet or not. Finally, further research should carry out a practice within a community, to prove this framework and establish the characteristics of the new generation of EE contents, based on horizontal strategies that promote reflection, discussion and debate regarding social issues.

The word count is **13,937** excluding the dedication, acknowledgements, table of contents, summary, charts, tables, figures, images, boxes, references and the appendix.

1 Introduction

We are no longer viewers, listeners, readers, users, or players.

Today, we are 'experiencers', whose roles and behaviour

change is based on how we use and approach media.

(Transmedia Manifest. Coelle et al., n.d.)

1.1 Rationale

The Entertainment-Education or edutainment (hereafter EE) is the design and the implementation of media messages that entertain and at the same time educate with the aim of promoting behaviour change (Singhal and Rogers, 2003). During the 1970s and 1980s, Miguel Sabido developed a methodology that used to apply unidirectional and top-down approaches to educating people about health issues, family planning, amongst other matters, through soap operas (Sabido, 2003). However, critiques to Sabido methodology emphasises that audiences' behaviour change cannot be predicted as a result of following a soap opera (Tufte, 2005), yet shaping viewers' response could be considered unethical, too (Fuenzalida, 1996).

Despite the fact that this methodology was born within the Modernisation Theory, using unidirectional interventions without taking peoples' opinion into consideration, it is still a current approach. Tufte (2005) identified three generations of EE interventions which evolved to better

address social issues, from the Shannon and Weaver methodology with linear communication, to participation and empowerment promotion. Nevertheless, none of these generations takes into account the opportunities that new technologies provide to produce and disseminate audiovisual contents. Likewise, digital media expands the experience of the audiences, combining different media into new stories. Transmedia is when different medium converges in the creation of a new part of a story, creating a new experience, and the audience becomes active instead of a passive receiver (Jenkins, 2006).

This dissertation would analyse the influence of the new technologies, and transmedia as a seed of the Fourth Generation of EE interventions, and maybe would allow this top-down methodology becoming a bottom-up strategy.

1.2 The opportunity statement

Information and communication technologies' penetration (hereafter ICTs) are growing up exponentially. In Uruguay, 80% of the population access to the Internet and mobile penetration was multiplied by 13 between 2012 and 2015. 45% of the population has a smartphone and 74% of mobile user access to the Internet through it (Grupo RADAR, 2015). The access to technologies provides a new environment for the production of audiovisual contents. With the use of ICTs, the production of EE contents could facilitate the social work of Non-Governmental Organisations (hereafter NGOs) and communities' mobilisation with a lower budget. The opportunity is the ICTs and its potentialities. Now the challenge is to identify how EE and ICTs can converge in the development of interventions to address social issues.

1.3 Objectives and research questions

1.3.1 Main Goal

This research is focused not on a current problem, but on the opportunity to take advantage of the possibilities of technology for the born of a new generation of EE contents. The main goal is to analyse the potentialities and limitations of the ICTs, and the transmedia strategies in the production of EE contents to address social issues.

1.3.2 Objectives and research questions

1. To review the EE potentialities in the new development agenda.

    a. What is the new agenda based on the Sustainable Development Goals (SDGs)?

    b. Can edutainment address any of the Goals and Targets of the SDGs?

2. To critically review the access and use of ICTs in Uruguay to identify a suitable environment for the Fourth Generation of Edutainment.

    a. What data is available regarding ICT and Internet access and use?

    b. What being 'connected' and 'disconnected' means?

    c. Connectivity and access guarantee the use and the sense-making?

3. To analyse basic storytelling formats and its possibilities throughout transmedia strategies.

    a. Is any storytelling format suitable for the Fourth Generation of EE content?

    b. What are the transmedia possibilities regarding this new generation?

c. There can be transmedia without technologies and connectivity?

1.4 Methodology

The methodology for this research would combine literature review and data analysis.

1.4.1 Literature review

The literature review would be divided into three sections: Communication for Development and Social Change (hereafter CDSC); Educational Entertainment, and Transmedia. The first section will present the definition of CDSC using the analysis and reflection of Freire (1990), Gumucio-Dagrón (2002); Gumucio-Dagrón and Tufte (2005); Melkote and Steeves (2015); Morris (2003); Servaes (1999, 2008); Servaes and Malikhao (2005); Quarry and Ramírez (2009) and Waisbord (2001).

The following section will present entertainment education theories, based on Bandura (2005) Social Learning Theory; Bouman (2002) and Singhal and Rogers (2003) definition of edutainment, some of the first experiences (Fraser and Restrepo-Estrada, 1998), and Sabido (2005) pro-social methodology. It also includes critiques made by Fuenzalida (1996) and Tufte (2009) and the revision of the three generations of EE by Tufte (2005, 2009).

Finally, there will be presented the transmedia and Cultural Convergence Theory by Jenkins (2006), transmedia storytelling (Jenkins 2010, 2014) and the new role of audiences regarding ICTs (Napoli, 2010; Zelenkauskaite and Simões, 2013), amongst other authors.

1.4.2 Data analysis

The data analysis would be focused on information regarding access to ICTs in Uruguay. There will be reviewed national reports from the National Statistics Institution and Grupo RADAR, which every year provides a study regarding the Internet users. This research would also review the Global Information Technology Report. To narrow the analysis to Uruguay, it will be presented the main policies regarding the ICTs' promotion.

1.5 Limitations

This dissertation based its work in the influence of ICTs and Internet in the evolution of the EE interventions. However, there are limitations regarding access and connection. According to the World Bank database (2016), in 2014 the worldwide Internet users were 40.7% (see Figure 1). Most of the users are located in developed economies, being almost all Africa and some part of Central Asia with less than 30% of the population connected. Thus, not only almost the 60% of the world population is not connected, but also the poorest population are excluded of the Internet. This research would acknowledge that connectivity limitation.

Another limitation is that this research is a theoretical analysis. I was not possible to do field work to prove the Conceptual Framework, due to reasons of lack of time and connections with a community interested in producing their EE content to address a social issue. Finally, to narrow the research some definitions were taken arbitrarily, such as the identification of a social problem to address related to the SDGs (food loss and food waste reduction), and the selection of the country to analyse the Internet and ICTs' penetration (Uruguay).

FIGURE 1: Internet Users

Internet users (per 100 people)

International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.
License: Open

Line   Bar   Map   Share   Details

< 12.25
12.25 - 31.70
31.70 - 51.04
51.04 - 65.40
> 65.40
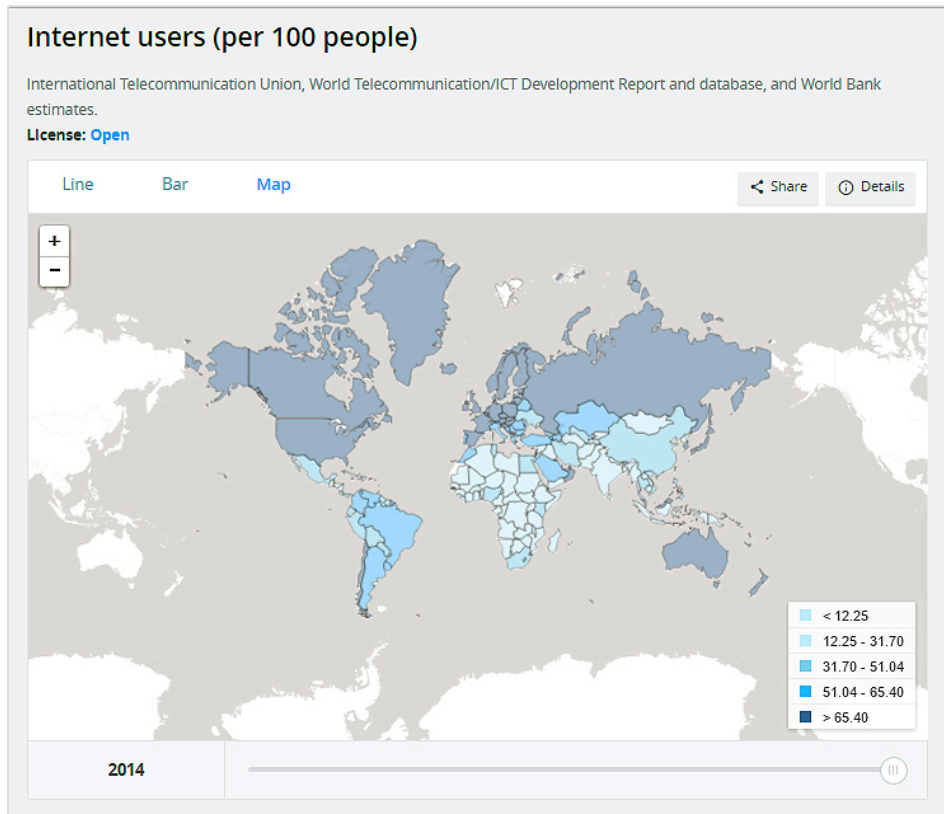
2014

(The World Bank, 2014)

2 Literature review

2.1 Introduction

The Literature Review would be divided into three main areas: Communication for Development and Social Change (hereafter CDSC), EE as a CDSC methodology and the convergence of the ICTs into new media and new audiences. The first part would be focused in the CSDC, the tension between the two main approaches and the definition of the field to guide this research. Secondly, the EE as a top-down methodology would be presented and delved to understand its potentialities and limitations. Finally, with the developing of the ICTs, audiences and media had evolved to a new relationship between them and the sender-receptor relationship. That relationship would be reviewed with the concept of transmedia and cultural convergence.

2.2 Communication for Development and Social Change

There is plenty literature about CDSC as study field with multiple definitions about theories and practices which look forward to creating positive change with, for and within a community. It is, also, known that there is a tension between the two main approaches to this area; a tension that remains (Morris, 2003; Servaes, 1999; Waisbord, 2001). Development as a concept became a word which had been seen through many perspectives (Desai and Potter, 2014; Willis, 2011). The first Communication for Development theories -related to Modernisation Paradigm- left us with lots of lessons learned. Some of them were the limitations of top-down and linear communication approaches, based on the idea that the dissemination of information provided from a deft source to a mute receiver it would be enough to create change (Freire, 1990; Melkote and Steeves, 2015; Morris, 2003; Quarry and Ramírez, 2009; Servaes, 1999; Servaes and

Malikhao, 2005; Waisbord, 2001). On the other side of this tension, the Dependency Theory recognised that underdevelopment was a result of the dependency from the Southern to the Northern nations, and promoted a reorientation of social sciences. The role of the communities in the definition of needs and solutions, and the listening process to acknowledge the value of culture and tradition was the key to promote collective dialogue to improve social welfare (Balit, 2013; Figueroa et al., 2002; Freire, 1990; Morris, 2003; Servaes, 1999; Waisbord, 2001).

This research understands CDSC as a two-ways interaction between actors who promote a change in some behaviour or practice. Most of the time, one of these actors is an external organisation with financial influence, and the other actor is a community who is believed to need a change. It was mentioned 'believed to' because it is commonly seen that all the definitions are made by one of these actors: the external organisation. In this relation, as Gumucio-Dagrón (2002) reflects, the role of a communication practitioner is to listen and facilitate the dialogue between the people involved to make them able to create that change, in a sustainable way, which means creating a socially, economically, politically and environmentally affordable change. As Figueroa et al. (2002) add, the sustainability of social change is more achievable if the community owns the process of communication, giving voice to the unheard to empowering them.

The topic of this dissertation is about a top-down methodology: educational entertainment. It belonged to the first stage of this field and was developed by practitioners who used entertainment contents to promote the audiences' behaviour change (Sabido, 2003; Singhal and Rogers, 2002, 2003; Singhal et al., 2003; Tufte, 2003, 2005, 2009). However, four decades after

its creation, new technologies and social media could be the component to allow this vertical methodology to become a horizontal strategy.

2.3 The Entertainment Education theories

This dissertation takes the EE methodology as a subject due to its potentiality to address social problems through the use of stories. Traditionally, EE contents discussed health issues not using only information dissemination, but producing creative, educative and entertaining communication contents (Sabido, 2003; Singhal and Rogers, 2002, 2003; Singhal et al., 2003; Tufte, 2003). One formula used by one of the first EE experiences was 60% entertainment, 30% information, and 10% education (Fraser and Restrepo-Estrada, 1998:134). However, in this kind of interventions, there are no recipes, because what worked in one experience and one community, could not work into another context. Box 1 presents two definitions of EE.

BOX 1 - What is EE?

Singhal and Rogers define EE as "the process of purposely designing and implementing a media message to entertain and educate, to increase audience members' knowledge about an educational issue, create favourable attitudes, shift social norms, and change over behaviour" (Singhal and Rogers, 2003:5). This definition made this methodology be part of the first generation of Communication for Development theories, with a top-down approach, due to implies that the change can be done through the dissemination of the message (Fuenzalida, 1996). However, the production of an EE content needs a previous research to gather the most relevant information, from the audience and people who are going to be represented in the storytelling, to create the scripts and the story to be told (Fraser and Restrepo-Estrada, 1998). *(Cont.)*

2.3.1 The beginning of the EE

The cartoon 'Popeye', created in the 30's, it is probably one of the first EE content produced with the aim of promoting the habit of consuming vegetables, especially spinach, amongst the children in the United States (Tufte, 2005). However, relating to development issues, there was an educational campaign from 'Radio Sutatenza' (see Box 2) created in 1947 by the priest José Joaquín Salcedo, which produced an informal radio programme to educate farmers in more vulnerable rural areas in Colombia (Fraser and Restrepo-Estrada, 1998).

A couple of years after, in 1951, in the post-war England, Godfrey Baseley -a rural programme organiser of the BBC- created the radio series 'The Archers' (Fraser and Restrepo-Estrada, 1998; Tufte 2009). Baseley had the challenge of setting up a radio show which promotes the agricultural productivity for the country's subsistence. However, he identified that regular radio shows did not fulfil the audience needs. The biggest problem identified was that the writers of the show were not farmers, and they did not know anything about farming. Thus, he decided to ask the farmers about their concerns and everyday challenges to writing the scripts for the new

radio show (see Box 3). Both initiatives in EE were based on the information provided by the farmers, to know their needs and their feelings about their everyday issues.

BOX 2 - 'Radio Sutatenza'

The show promoted basic skills of literacy, family and individual health, and the improvement of farm production through knowledge. It involved the community since the beginning, and they help to build the radio station together. However, after 40 years of transmissions, the radio closed. The reason was that the priest Salcedo used to have the support of a Catholic Archbishop, but when this Archbishop died, Salcedo lost any support from the conservative church. The radio philosophy was based on the motivation to farmers, giving them the capacity to take responsibility for their own destinies, and this was considered as a threat to the conservative society of Colombia (Fraser and Restrepo-Estrada, 1998).

BOX 3 - 'The Archers'

During the research to create the radio show, Baseley asked farmers about their job. He discovered that their way of learning was based on what their neighbours used to do for a particular problem, and then they imitated the successful procedures and avoided the unsuccessful ones. The first edition of his radio show was named 'Over a Neighbour's Hedge' in which Baseley used to ask questions to experts, to understand technical issues, but explained in simple terms. The evolution of this radio programme was the story named 'The Archers', a rural family with common problems to address every day; this series it is still on the air. (Fraser and Restrepo-Estrada, 1998; Tufte, 2009).

Furthermore, as a strategy within the communication studies, this field had its first experiences in the late 70's, with Miguel Sabido's methodology in Mexico. Sabido analysed the Peruvian *telenovelas*, based on Albert Bandura's Social Learning theory, to understand their theoretical

and psychological basis (Singhal and Rogers, 2003; Sabido, 2003). Sabido in that deconstruction of the soap operas found a relationship between the messages and the effect over the audiences. He realised that there were flows and tones of the message which affected the part of the brain related to the emotions: the limbic brain; and if the messages were related to personal emotions could catch people's attention easily (Sabido, 2003). He based part of his theory on Albert Bandura's Social Cognitive theory about how people can be influenced by their motivation and behaviour (see Box 4).

Bandura's social modelling was the base that Sabido used to create his pro-social soap operas. Showing different role models, with positive and negative actions and consequences, he designed stories in which the characters made decisions about behavioural issues, such as sexuality, contraception, gender violence, amongst others. The results of his soap operas were, in some way, positive regarding the behavioural change proposed: people started to think of family planning, and illiteracy levels diminished with the increment of adult literacy (Sabido, 2003). However, according to Tufte (2009), it is still a debate and a controversy whether or not this kind of content can have real influence over the audiences to provoke change in their behaviour and puts the audience in a passive role.

BOX 4 - Bandura's Social Cognitive Theory

Bandura (2003) explains the concept of agency as the capacity of a person to intentionally define the course of their life. However, this agency also depends on social structures with resources, traditions, and social sanctions which are designed to organise, guide and regulate the relationship between people living in society.

Bandura adds that people learn through two ways: by their direct experience, and by the social modelling. The first way, it is related to rewards and punishments that people received regarding their acts. For the individual point of view, the consequences of the act could end in a reward if the action was correct or in a sanction if the action was a mistake. The second way uses the social norms to show the consequences of anybody's acts. Thus, in this case, the person could know the sanctions and rewards of a mistake or right action. Knowing the experience of 'the other', a person could know in advance the possibly future consequences of his or her acts.

2.3.2 Critics to Sabido's methodology

Nonetheless, Fuenzalida (1996) critiques Sabido's methodology, and he explains that this model of pro-social soap opera has three types of deficiencies. First of all, he argues that the model tried to use a top-down strategy acting as a hypodermic needle, injecting contents in people with passive minds. He, also, adds that people are resistant to change due to the real change is learnt and reproduced in society, it is internalised through habits, and its sustainability depends on social, cultural, and family interactions. Thus, that change cannot be created only watching positives and negatives role models.

The second failure of the model, according to Fuenzalida, is that the pro-social soap opera proposes desirable and positive attitudes, being manipulative with the audiences. He pointed out that what is positive or negative for a person cannot be the decision of a planner or a TV producer, and it could be unethical to define what is right or wrong for a community. He exemplifies with the family planning issues in Sabido's soap operas, which was related to the reduction of birth rates but in poor social groups, promoted by agencies of birth control. The third deficiency in Sabido's model is that it comes from an era without any reception studies. Thus, the interest of the audiences, their perception and reception were not present in his methodology. It puts the audience in the passive position that was referred above.

Also in contrast to Sabido's methodology, since 1980 Red Globo produced soap operas in Brazil promoting cultural and social problems, not as a strategy for social change, but to show another side of the Brazilians life (Tufte, 2009). Tufte (2005) had studied several soap operas to understand how they can influence in development issues in Latin America. He identified three generations in the EE production that show the evolution of this methodology. The first generation includes the interventions within the Dominant Paradigm (between 1970 and 1990) which involves the Social Marketing theory and the work of Miguel Sabido. The second generation, from middle 90's was defined as the 'bridge of paradigms' and involved the work of Paulo Freire as the leading influence, based on the participatory communication and community dialogue as components related to social change. Finally, the third generation is the most critical with the EE methodology and goes further than the dissemination of information and participatory processes and promotes the empowerment of the audiences focusing the contents in a social critique, looking for the identification of social problems. From the concept of 'lack of information' to the 'community involvement in participatory interventions', and the

'empowerment process', EE methodologies had been evolved to the point of accepting that people are not a passive receiver, but an actor who can identify the structural inequalities and the power relations present in its life, and who can be agent of their own change.

2.4 New media and new audiences

Bertolt Brecht in 1927 predicted the use of radio as an instrument for change, and the radio was also the precursor of participatory communication and interaction between media, producers and audiences (Tufte and Mefalopulos, 2009). Thus, with the evolution of technology, and the explosive changes made after the creation of the Internet, traditional media and audiences had passed through an evolution incorporating different elements in their relationship. This evolution was not only a consequence of the development of the technologies but a general environment change between audiences and the media producers. For example, the access to new mobile technology, such as smartphones or tablets, made the media producers to think about contents to be reproduced in a PC, smartphone, tablets and also with the ability to be shared amongst users (Napoli, 2010).

The new media brought new audiences which work in communities of fans. Jenkins (2006) introduced the concept of convergence as the flow of contents across multiple platforms, but also across separate industries (such as movies and games production) but now reunited for one aim: to create new experiences for the audiences. Jenkins explains it as the "convergence culture, where old and new media collide, where grassroots and corporate media intersect, where the power of the media producer and the power of the media consumer interact in unpredictable ways" (Jenkins, 2006:2). In this cultural convergence, he adds that audiences

migrate looking for the entertainment experiences that they want to watch and, also, be part of. Significant communities of fans of film or TV shows (such as Harry Potter, Star Wars, Lost, Game of Thrones, and so on) gathered into virtual spaces to share comments, to try to know more about their favourite characters and stories. Even, sometimes, they recreated part of the missing story, imagining how to fill the gaps in these shows.

In the beginning, this evolution provoked a rejection, i.e. the TV shows providers were against of the contents disseminated via YouTube. However, this network -and the rest of social media network- grew so much and so fast that traditional media had to adapt and to adopt it as part of their relationship with the audiences. The reason was that the audience were already there, seeking out for new information amongst the dispersed media content (Jenkins, 2006; Napoli, 2010). Thus, convergence is about flow, separation and reunion of traditional and new media. It is about the cooperation between actors and the consolidation of technologies, industries, culture and social change within all the media industry.

On one side, from the audiences' point of view, convergence is the consolidation of a collective intelligence, which Jenkins defines as the ability of the digital communities to share their knowledge in order to fill the gaps in the stories told by the media, and expanding the experience of being part of that society, regarding that storytelling. The new media does not have separated producers and consumers. The roles are shared amongst the communities which interact with each other, in a very complex way through which the consumers also are part of the production of the contents, being 'pro-sumers' of the entertaining content that they want to watch (see Box 5).

BOX 5 - *'Tiranos Temblad'*

Tiranos Temblad is a YouTube channel in which one producer searches on YouTube all the home-made videos uploaded in Uruguay or containing the word 'Uruguay', and it creates a mix of videos showing what happened during the last month in that country (Ferrando, 2012). The success of this show grew exponentially and currently is the audience who records and uploads videos, tagging the show to be part of it, they are prosumers of the show. The title refers to a part of the Uruguayan national anthem, and it means Tyrant Tremble.

As Jenkins (2006) says, convergence occurs when people take media in their hands, and not only for entertainment but to be part of their lives, relationships and memories. Furthermore, old and new media are forced to coexist in this scenario. From the media producers' side, nowadays the important task is not reaching the big mass, but the right audience (Jenkins, 2006: Napoli, 2010). Napoli calls it "audience fragmentation", and it refers to the increasing segmentation of the audience attention regarding their interests, having "millions of audiences of hundreds instead of hundreds of audience of millions" (Napoli, 2010:57).

Moreover, social media network and the big data makes this possible, due to media networks can know who, when and where is the audience for their shows. Big data's grow on the increasing amount of user-generated content (UGC), providing a new vision of audience participation (Zelenkauskaite and Simões, 2013). According to these authors, social media are the main provider of UGC, putting big data issues in the centre of the media strategies, helping companies to think in more effective content driven directly to their consumers, or in this case, to their audiences with better services and products which create better experiences.

Thus, the convergence is also into the big data: it is in the grassroots and the big corporations. It is a top-down production from the media producers and, and the same time, a bottom-up process from the consumer selection of subjects and interest. There is, also, an "intermedia fragmentation" which means that multiple platforms can reach that fragmentized audience with a variety of broadcast options: from live TV, cable, Internet streaming, podcasts to download, networks such Netflix, amongst many other options (Napoli, 2010).

This convergence also affects the storytelling process and makes media companies to rethink the role of the audience, not passive anymore and being part of the creative process[1]. As the quotation at the beginning of this dissertation, the Transmedia Manifest express that audience is no longer passive, but 'experiencers' and the behaviour change depends on how the audience approach media. Transmedia storytelling, according to Jenkins (2006; 2010), is the process through which elements of a fiction reality get dispersed across multiple channels with the aim to create a coordinated entertainment experience. In this process, each medium shows the best and make the most of itself, according to its characteristics and use. Thus, the same story can be told through multiple media channels, with different elements regarding each medium characteristic, presenting different aspects of the characters, the places, the time and the story (Scolari, 2013).

---

[1] Arrested Development was a sit-com produced by FOX network, and when it was cancelled at the third season, the audience claimed for it, and Netflix took the decision of concluding the story.

2.5 Conclusion

As a conclusion of this Literature Review, the media and audience evolution show that both can be part of the new EE production. Taking into consideration the potentialities of new digital and social media, with the aim to address development issues, is possible to provide a critical thinking into the audiences, but at the same time to encourage them to be part of this production to promote social change. The following chapter would present the Conceptual Framework related to the EE production and its evolution to a new generation regarding the new technologies and new audiences.

3 Conceptual framework

3.1 Introduction

The previous chapter introduced the main theories of EE and the convergence of the ICTs in media and audiences. Tufte (2004, 2005) had deconstructed the EE theories into three generations due to he realised that during the past five decades EE interventions had evolved as well as the Communication for Development did. His deconstruction is well accepted and established in the field. His ideas reviewed would be the base of a Conceptual Framework which would analyse the role of ICTs in the production of EE contents as a seed of a new generation.

3.2 Towards a fourth generation of EE contents

According to Tufte's analysis, each generation had different approaches to some dimensions of EE interventions related to how audience participates and contents makes sense to them (see Table 1). Thus, the first generation (from the decade of 1970 until the middle 90s) were characterised by the Dominant Paradigm and the Behaviour Change Communication theory. Throughout this phase, the problem to address was considered the lack of information within the audience, and entertainment was taken as a tool to send messages to promote change (Cardey et al., 2013; Tufte, 2004, 2005). For this generation, the audience was seen as a big mass and its traditional culture was considered a barrier to change. Nevertheless, the expected outcome was the individual behaviour change, measured by quantitative methodologies.

The second generation, during the middle 90s, evolved adding new forms of community participation, and the problem was characterised by the lack of skills and structural inequalities. This generation, led by Paulo Freire's thinking, took this methodology as a tool for change but

building partnerships with the community as an allied. It was the first time that the audience was seen as an active actor in the behaviour change process, and promoted public and private debates regarding the development issues.

Finally, Tufte explains that the third generation, also based in the liberating pedagogy of Paulo Freire and the Communication for Social Change approach, added to the previous ones the analysis of the power relations and social conflict and the identification of the problem that that power relations can create. This generation of EE interventions is focused on the process than the product, and based on the popular culture as a way of expression and empowerment of communities. The expected change is the articulation of social and political relations in which the audience is an active and a diverse group of actors.

However, even though these generations are current and well accepted, they can be analysed with the influence of the new technologies and new media in the creation of EE contents and the audiences' reaction. Thus, this framework would look forward to identifying which components of Tufte's framework are present in a possible new generation of EE contents, characterised by the audience participation through social media, the access to technologies and the production of content to address social problems. This audience participation could be characterised as self-mobilisation, as people can express and engage independently from external organisations, having the decision making of their own process (Pretty et al.1995; Cornwall 2008). Through self-mobilisation people can take initiatives without being motivated by external institutions, addressing problems related to social injustices and unequal opportunities from the communities' point of view.

TABLE 1 - Thomas Tufte's "(De)construction of the field of entertainment-education" and the

proposal of the fourth generation of EE contents.

Year	1970	1980	1990	2000	2010	2020
Entertainment-Education	1st Gen. Social marketing			2nd Gen. Bridging paradigms	3rd Gen. Empowerment	4th Gen. Self-mobilisation through transmedia storytelling (?)
Definition of problem	Lack of information			Lack of information and skills inappropriate contexts Structural inequalities	Structural inequalities Power Relations Social Conflict	
Notion of entertaintment	Instrument Tool for message conveying			Dynamic Genre Tool for change	Process Popular culture Genre as form of expression	
Notion of culture	Barrier			Ally	Way of Life	
Notion of catalyst	External exchange Agent targeting X			External catalyst in partnership with the community	Internal community member	
Notion of education	Banking pedagogy Persuasion			Life skills Didactics	Liberating pedagogy	
Notion of audience	Segments Target groups Passive			Participants Target groups Active	Citizens Active	
What is communicated?	Messages			Messages and situations	Social issues and problems	
Notion of change	Individual behaviour Social norms			Individual behaviour Social norms Structural conditions	Individual behaviour Social norms Power relations Structural conditions	
Expected outcome	Change in norms and individual behaviour Quantitative results			Change in norms and individual behaviour Public and private debates	Articulation of social and political process Structural change Collective action	
Duration of interventions	Short term			Short and long term	Short and long term	
(Tufte, 2005:173)						

3.3 The ICTs technologies and audiences' use

Jenkins (2006) analysed the convergence culture of old and new media and the role of the audience in this convergence. He adds that that convergence happens when people took media into their hands and built their everyday relationships using the technologies and social media to share their thoughts and memories. This convergence also affects the storytelling process of production and consumption, while the audience is more active consuming and sharing contents within the social media. Thus, this conceptual framework would look forward to identifying the transmedia components for a Fourth Generation of EE contents.

Besides, the Global Information Technology Report 2016 (World Economic Forum and INSEAD, 2016) analyses the capacity of competitiveness and well-being of countries according to their ICTs development, through the measurement of their political and business innovation environments, infrastructure, affordability, skills, usage, and economic and social impact. ICTs' development is different in each country, and each one can respond differently to the challenge to create statistics related to this issue (Jeskanen-Sundström, 2007). Therefore, I will use the international reports available, and compare the information narrowing this research to the case of Uruguay. These statistics also would allow contrasting national with international data regarding new technologies.

3.4 Transmedia storytelling

Traditionally, EE interventions used radio and TV shows to send the message to the audiences (Fraser and Restrepo-Estrada, 1998; Sabido, 2003; Singhal and Rogers, 2003; Tufte, 2004, 2005, 2009), even though there were also folk theatre initiatives such as those proposed by Augusto

Boal with the aim of creating new entertainment experiences within the communities (Tufte, 2004). Transmedia storytelling has the aim of creating a unique piece of a known story, mixing several media and channels, providing the audience with a whole new experience (Jenkins, 2010). The ICTs provide the natural environment to transmedia storytelling, especially in fans' hands.

Social media audience is scattered, but connected through the technologies and sharing lots of contents and thoughts. Couldry (2008) defines digital storytelling as the ability of the audiences to represent the world around them using a shared infrastructure, the social and digital media. It is presented as a personal narrative that users share with their online networks (including thoughts, pictures, videos, blogs), remaining in the vast archives of the World Wide Web, and including mandatory elements such as tags, keywords, and hashtags to be well indexed and found, commented and shared. Entertainment content could take advantage of transmedia storytelling to include the audience in the story writing. There are examples of EE contents which include the community in this process that would be presented in following sections.

Regarding formats, EE interventions can be created for different formats and media. For example, 'Shamba Shape Up' is a TV series which give farmers, but also television and radio general audience, practical knowledge to improve their productivity and income on their farms or '*shambas*' (Mediae, n.d.). Thus, apart from the classic EE drama shows, other formats such as documentaries, news reports, life stories, vox-populi or testimonials, based on the transmedia possibilities could provide a broad range of formats for a new generation of contents produced with ICTs.

3.5 The conceptual framework

According to the theories presented above, in order to create a Conceptual Framework of a Fourth Generation EE interventions, this research would analyse the interconnection of three components (see Figure 2):

• the review of SDGs (United Nations, 2015),

• the analysis the ICTs concerning access, use and connectivity (World Economic Forum, 2016; Grupo Radar 2015, AGESIC and INE, 2013),

• the transmedia storytelling influence (Jenkins 2006, 2010, 2014)

FIGURE 2: An Edutainment Fourth Generation Conceptual Framework

The SDGs agenda

Transmedia storytelling

ICTs access, use and connectivity

A 4º Generation of EE?
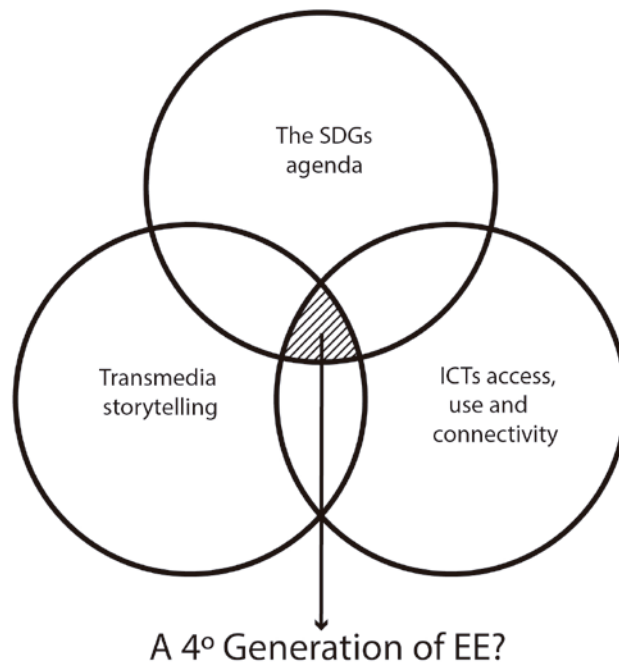
(Source: original framework)

Nevertheless, this research cannot analyse the empty intersections between the SDGs/ICTs, SDGs/transmedia storytelling, and ICTs/transmedia storytelling due to it would need a further research which cannot be addressed in this opportunity.

Finally, to prove the Conceptual Framework, the expected outcome would be the description of the 4th Generation of EE contents, as a way of self-mobilisation through the production of contents, following the previous work of Thomas Tufte but adding new components (see Table 2).

TABLE 2 – Proposal of the 4th generation of EE characteristics:

Entertainment - Education	The 4th generation *Self-mobilisation by transmedia storytelling (?)*
Definition of problem	
SDGs problem addressed	
Notion of entertainment	
Notion of culture	
Notion of catalyst	
Notion of education	
Notion of audience	
What is communicated?	
ICTs minimum access	
ICTs minimum use	
Internet conectivity	
Technical limitations	
Expected outcome	
Duration of interventions	

3.6 Conclusion

This research would use this Conceptual Framework to analyse the potentialities of each component (transmedia storytelling, ICTs, SDGs) in the creation of new EE interventions. These three elements would be analysed throughout the three objectives proposed in Chapter 1.

The aim of this framework is to identify the approach for a new generation of EE contents, created from the community grassroots, combining ICTs and transmedia storytelling to address a social issue. This Fourth Generation could be characterised by the action of audiences which could be producers and consumers of their entertainment-educational contents, taking advantage of the ICTs, using media combinations and different storytelling formats, with the aim of promoting social change in their communities.

4 Objective #1: To review the EE potentialities in the new development agenda

4.1 Introduction

This chapter will address the Objective #1: "To review the EE potentialities in the new development agenda". The aim of this chapter is to introduce the new development agenda settled by the United Nations in September 2015, and the potentialities of the EE methodology in addressing the SDGs' issues in general, and the Goal #12 and target 12.3, in particular.

4.2 Data analysis

4.2.1 The new agenda of development

On the 25th of September 2015, the United Nations adopted the resolution 'Transforming our world: the 2030 Agenda for Sustainable Development' in which settled 17 SDGs and 169 targets with the aim of eradicating poverty and social injustices by 2030. This new agenda seeks the objectives that the Millennium Development Goals (hereafter MDGs) could not achieve. The new development programme also looks forward to creating a balance amongst the three dimensions of sustainable development: the economic, social and environmental. These goals are focused on people welfare, the planet protection, the prosperity of humanity and economies, peace amongst cultures, and to build partnership amongst nations (General Assembly UN, 2015).

However, the concept of sustainability is not new, and it was firstly mentioned in 1987, in the Brundtland report 'Our Common Future', by the World Commission on Environment and Development, and formulated a "global agenda for change" (Brundtland Commision, 1987;

Adams, 2001). According to this report, the concept 'sustainable development' refers to "meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life", in relation not only to current population, but thinking of the future generations as well (Brundtland Commision, 1987: 41). However, in that time this report did not mention the dependency between Southern and Northern nations, or some of the social injustices that are currently part of the new agenda, such as gender inequities, work dignity, consumption and production issues, amongst others topics (Adams, 2001).

Moreover, the world still has pressure over the global and local perspective, with world population overpassing the seven billion people, and with limited natural resources the concretion of a multidimensional strategy it seems to be crucial for the earth ecosystem (Sachs, 2012). This author adds that the main current challenge is to face different crises, such as climate change, the human-caused greenhouse gases emissions, environmental pollution, and acidification of oceans, and other issues that affect biodiversity. In between of these Earth crises, it is still the aim of ending poverty and social injustices as an essential part of the new agenda. Thus, after the MDGs, the United Nations defined this new agenda of development with the concept of sustainability as the main guide to eradicating poverty and inequalities amongst countries, promoting economic growth, fostering social inclusion and preserving the planet, to meet today's needs, without affecting the needs of the next generations.

4.2.2 The Goal #12: To ensure sustainable consumption and production patterns

From the 17 SDGs, this research would take the Goal number 12: "To ensure sustainable consumption and production patterns" and the Target 12.3: "By 2030, halve per capita global

food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses" (United Nations, 2015:n.d). Food waste and food loss are a relevant matter worldwide, representing more than US$ 680 billion in developed countries and US$ 310 billion in developing nations of loss in their economies. Regarding tonnes of food lost or wasted, in total there are more than 1.300 million tonnes; 670 in developed countries and 630 in developing countries. While in the developed countries most of the food waste happens at the consumption stage, in developing countries 40% of the losses occur at the beginning of the food value chain (see Table 3) at postharvest, storage and processing levels, as a result of lack of infrastructure and gaps between the farms and the markets (FAO, 2014, 2015, 2016). The technologies and harvesting techniques used are traditional, excluding the smallest farmers of the big markets, and even local markets (Parfitt et al., 2010).

TABLE 3 - Characterisation of post-harvest infrastructure in developing countries:

Type of post-harvest infrastructure	Technological development	Level of development	Supply chain	Type of growers	Markets and quality
Developing traditional systems.	Simple technologies Intensive labour Traditional storage systems and harvesting techniques	Low-income countries	Poor integration with local markets Many intermediaries supplying urban markets	Small holders Subsistence farmers	Local markets Limited access to international markets
Source: Parfitt et al., 2010: 3068					

In developing countries, the causes of the food losses occur at the early stages of the value chain, and they could be related to managerial and technical constraints in traditional harvesting techniques as well as storage, lack of cooling facilities and resources (see Table 4). Thus, this issue also presents problems related to behavioural habits of farmers and intermediaries

involved in the post-harvest process. For example, the crops left in the field, a wrong timing for harvest, poor harvesting techniques, no control over pests and diseases, poor techniques of cleaning, classification, contamination or packaging during the primary process stages. During the consuming process there are also bad habits undermining this problem, such as an inadequate storage of the food, confusion in the expiration date (through the 'best before' or 'use by' dates), traditional eating habits, food discarded or mixed with not organic waste (Parfitt et al, 2010).

TABLE 4 - Examples of food lost throughout the maize value chain. The (*) marks the causes that could be related to human behaviour.

Stage	Causes of food wasted & lost	Responsible
Harvesting.	Crops left in the field (*) Crops ploughed into the soil Crops eaten by birds and rodents Timing of harvest is not optimal: loss in food quality. (*) Crop damaged during harvesting or poor harvesting technique. (*)	Grower Farmer
Drying.	Poor transport infrastructure. Loss owing to spoiling/bruising.	Distributor
Storage.	Pests. (*) Diseases. (*) Spillage. Contamination. Natural drying out of food.	Farmer
Primary processing (cleaning, classification, grinding, packaging, milling, etc.).	Process losses. (*) Contamination in process.	Farmer Miller
Secondary processing (mixing, cooking, frying, etc.).	Process losses. (*) Contamination in process.	Cook
Product evaluation (quality control, standards).	Product discarded/out-grades in supply chain. (*)	Market representative
Packaging (weighing, labelling, sealing).	Inappropriate packaging damages produce grain spillage from sacks attack by rodents.	Market storage
Marketing (publicity, selling,	Damage during transport.	Market employees

distribution).	Spoilage poor handling in wet market. (*) Losses caused by lack of cooling/cold storage	
Post-consumer (recipes elaboration).	Plate scrapings. Poor storage/stock management in homes discarded before serving. (*) Poor food preparation technique. Confusion over 'best before' and 'use by' dates. (*)	Consumer
End of life (disposal).	Food waste discarded may be separately treated. (*) Fed to livestock/poultry. Mixed with other wastes and landfilled. (*)	Consumer
Source: Parfitt et al., 2010: 3066		

Globally, food waste is one of the biggest challenges within the food system, due to it provoke an enlargement of the food production along the value change, creating a negative impact on the environment due to even when is wasted, more food is needed to be produced (Thyberg and Tonjes, 2015). This waste affects communities socially and economically, and the diversification of the diet creates changes within consumers and markets, affecting farmers as well. In some countries if a potato has not a certain size and shape, markets do not accept it and, therefore, farmers cannot sell the imperfect vegetables and sometimes have to throw it away. Thus, in a world where more than 790 million people still suffer chronic hunger worldwide (UNDP, 2015) almost 1.3 billion tonnes of food is wasted, representing the loss of one-third of all edible food annually produced globally for human consumption (Finn, 2014).

Consequently, food waste can be considered as a behaviour matter related to the development and the reduction of this kind of loss can help global needs. If there is less food waste, there would be fewer resources used for the food production. Thyberg and Tonjes (2015) explain that there is also a cultural issue playing an important role in the relation between food, eating habits, nutrition and food discarded. Table 5 shows the comparison between the USA, the United

Kingdom and Turkey regarding food wasted per household annually, which shows that even there is a difference of more than 50 kilos in a developing country, the problem is relevant also in the larger economies. Furthermore, according to Parfitt et al. (2010) in developed countries, there are also challenges related to the supply chain which involves bad payment terms affecting small farmers, high-quality standards that exclude small farmers to access into big markets.

TABLE 5 - Food wasted per household / year

Country	Food wasted estimated kg per household per year
USA	233 kg
England	240 kg
UK	270 kg
Turkey	298 kg
Source: Parfitt et al., 2010: 3075	

Nonetheless, consumers habits regarding food waste are related to behaviour attitudes such as buying more products due to a not adequate shopping list; impulse buying;; food not prepared and gone off or mouldy; making meal portions that are too large, amongst other habits (Parfitt et al., 2010).

4.3 Discussion: can EE interventions address food waste and food loss problem?

As it was explained in the Literature Review, the EE methodology had the potentiality to enhance behaviour change of an audience. However, Tufte (2003) pointed out that an intervention cannot know in advance whether the content would make sense to the audience or not, as it concerns the individual production of meaning by the spectator. Moreover, according to Bouman (2002), an EE intervention should include the facilitation debate and dialogue promotion. Some examples are drama show such as "Intersexions"[2] and "Soul City"[3] in South Africa, or the teenagers soap operas in Nicaragua *"Sexto Sentido"*[4], and *"Contracorriente"*[5] (Tufte, 2004; 2009), which included part of the audience in the production and script writing, promoting the discussion amongst the community of topics such as gender, sexualities, social injustice, human trafficking, et cetera.

Although food waste and food loss are not part of the traditional EE interventions' storytelling (mostly based on health issues), there is a needed debate on this topic, regarding consumers and producers behaviours. The world represented in the United Nations (2015) agreed on a new agenda which includes different topics to address social development and sustainable consumption is one of the major issues regarding waste production and management. As

---

[2] "InterSEXions" is a South African TV drama series about interpersonal relationships which traditionally remain in the private sphere. This show promotes the discussion about the "unsaid in love", sex and the HIV/AIDS prevention (Johns Hopkins Health and Education in South Africa, 2013).
[3] "Soul City" is another South African TV drama serie, created by Soul City Institute for Social Justice to include health and social issues into real-life stories (Soul City Institute for Social Justice, 2016).
[4] *"Sexto Sentido"* and *"Contracorriente"* are edutaintment TV series created by the NGO Puntos de Encuentro, which works in Nicaragua with the community, promoting gender equity and social change (Puntos de Encuentro, n.d.).
[5] Ibidem.

Thyberg and Tonjes (2015) explain, this is not a single response based only on personal preferences and attitudes, but also is the combination of cultural, social, geographic, economic and political factors related to power relations between actors who belong to the same value chain. Throughout the food system and value chain, there are several behaviour attitudes based on power relations that need to be reflected and debated socially and individually. For example, the consumer decides what kind of vegetable buy, sometimes rejecting the 'ugliest' looking food. Therefore, the stores decide which kind of vegetables buy in the markets based on their consumers' preferences; and the markets decide whether buy the 'perfect' or the 'imperfect' crop to the producers, who already made an investment that not always can by recovered if their crops are not 'perfect' enough. Thus, the most vulnerable person affected by the decision of a consumer could be the poorest farmers.

Also, there are some causes of food loss in developing countries, identified in Table 4, which can be avoided by different approaches between the individual in charge, the crop and the transportation to the market. At the marketplace, if the crop was accepted, it also can suffer damages if it is not well-packaged storage or cooked. And at the final of the chain, if consumers do not use the crop correctly there could be a huge amount of food loss that can be reduced. Thus, it can be said that the food lost every year is a consequence of behavioural attitudes of all the actors in the value chain, from producers to final consumers.

Thus, a subject such as food loss and food waste presents the potentiality to be addressed through EE interventions. This type of intervention should connect all the links of the chain, through which the different actors could reflect about their behaviour concerning food and their

relationship with the food they grow, sell and consume. Moreover, the intervention should encourage their combined participation to connect the whole chain (see Figure 3).

FIGURE 3 – An EE intervention for the food value chain
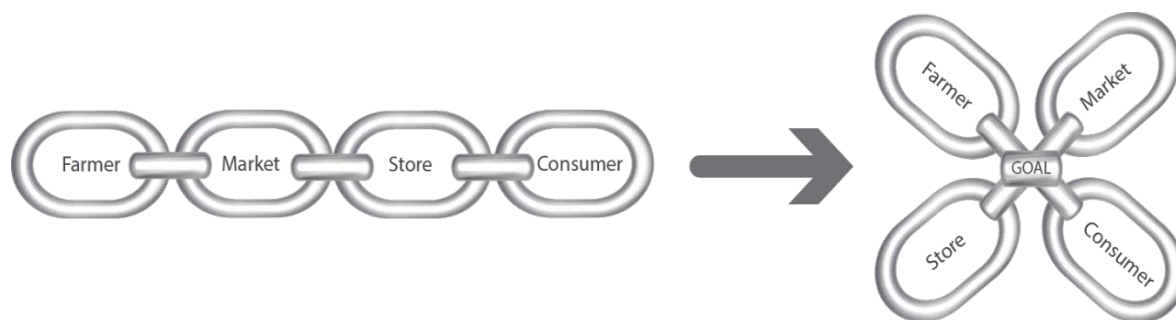
4.4 Emerging findings

To conclude this chapter, regarding the development agenda and the production of EE contents, can be identified the following findings:

- The new development agenda recognises the multidimensionality of development, which identifies in the poverty reduction subjects related to the relationship between the human being and the environment. Gender, welfare, dignity, biodiversity and sustainability are concepts that, even though it appeared in previous decades, today converge into 'development' as a concept, and they need to be addressed.
- Food waste and food loss are relevant issues for both, development and developing countries, and it should be discussed throughout the whole value chain. Both developed

and developing countries have producers, consumers and intermediaries that need to rethink their relationship with the food.

- Part of the food waste and food loss responds to behavioural attitudes that could be addressed through Communication for Development initiatives, particularly, through educational entertainment contents.

- A further research which involves different actors throughout the food value chain (such as growers, farmers, intermediaries, transportation, local markets, big markets, and consumers) should address the potentiality of dealing with this issue, promoting empowerment of the most vulnerable actors identified in that research.

- Power relations need to be studied in depth in order to create a theoretical framework for the best comprehension of this subject.

5 Objective #2: To critically review the access and use of ICTs in Uruguay to identify a suitable environment for the Fourth Generation of Edutainment.

5.1 Introduction

This chapter would address Objective #2: "To critically review the access and use of ICTs in Uruguay to identify a suitable environment for the Fourth Generation of Edutainment". It would include reports regarding ICTs penetration, access and use of the Internet and mobile devices (smartphones or tablets), international reports such as the Global Information Technology Report from the World Economic Forum, and complemented with the World Bank Database. To narrow this analysis to one country, there would be used data available for Uruguay (See Box 4), not only in the international report mentioned above but also in national statistics, complemented by national policies related to the promotion of the use of the Internet as a citizen right to information access. The aim of this chapter is to analyse the influence of the ICTs in a Fourth Generation of EE contents, based on the assumption that policies and technologies should converge in people better access and use of ICTs.

BOX 6 - Why Uruguay?

Uruguay is a small country, located in South America between Argentina and Brazil, with a population of 3,323,906 inhabitants. Is a democratic republic with a presidential system (Welcome Uruguay, 2007), and since 2005 is ruled by the left party (BBC and Murphy, 2004) which promoted social policies to eradicate poverty in the whole territory through the creation of the Ministry of Social Development, a new institution which led the national strategy of social emergency (Parlamento del Uruguay, 2005).

(Google Maps, 2016)

Uruguay is the leader in Latin America in the Democracy Index and Low Corruption Index (UruguayXXI, 2015), and third Latin American country with a better Human Development (UNDP, 2015). Since 2007 invested in the innovation development, through the creation of the Agency for Electronic Government and Information Society to promote the information access as a right (AGESIC, 2009) amongst other institutions and programmes created in order to promote the country's growth with social justice, which would be delve in this chapter.

5.2 Data analysis

5.2.1 Global evolution of the ICTs

The Global Information Technology Report (hereafter GIT) and the Networked Readiness Index (hereafter NRI) provides a global picture of the countries' development and their promotion of technologies[6] (see Box 7). The last GIT report (2016) says that the world is entering into the Fourth Industrial Revolution in which knowledge is becoming more accessible to more people, and the ICTs are the cornerstone for development. Moreover, highlights that innovation based on digital technologies and business models can drive economies growth, but also governments need to create a policy environment to promote the digital and innovation ecosystem. Thus, private and public actors need to work together to make this environment sustainable, allowing the smallest and vulnerable actors to participate and be involved.

However, if the future depends on how countries can "embrace digital technologies" (World Economic Forum and INSEAD, 2016: v), it is more important than ever to emphasise that more of the half of the global population is not connected yet. As Chart 1 indicates global Internet users grown from 8.1% in 2001 to 40% in 2014; also, as was mentioned above, the 60% of disconnected people represents the poorest population in the world.

---

[6] The GIT report is featured by the World Economic Forum, in partnership with universities such as Harvard at the beginning and INSEAD from 2004 up to date, this report has the aim of measuring the drivers of the ICT revolution using the Networked Readiness Index.

CHART 1: Global Internet Users (%)
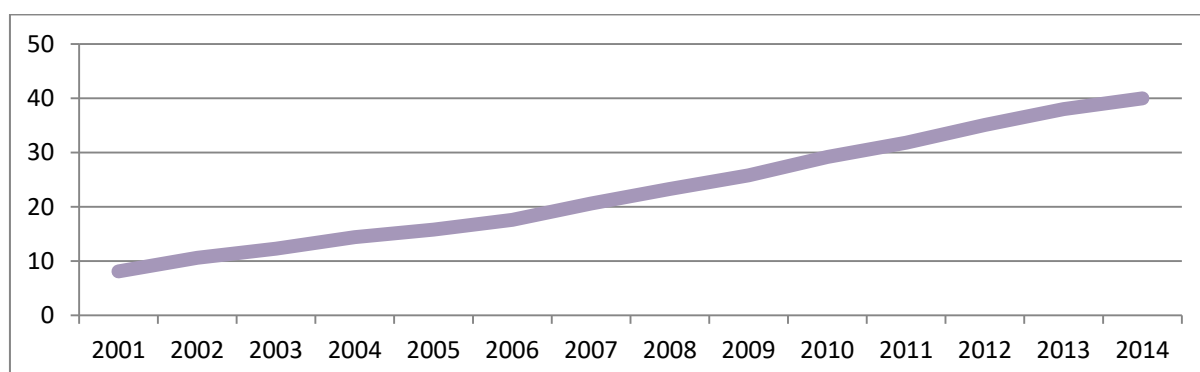
(The World Bank, 2014)

BOX 7 - The Network Readiness Index

The World Economic Forum presents itself as a not-for-profit and independent organisation, "not tied to any special interests" (World Economic Forum, n.d.). Therefore, it is one of the available documents which present a global picture of ICTs development. It analyses several factors related to policies, infrastructure and impact that enable a country to leverage ICTs to increase competitiveness and well-being (World Economic Forum and INSEAD, 2016).

The NRI measures the capacity of the 139 countries to leverage ICTs for the increment of their competitiveness and well-being based in four subindexes:

- environment (based on the existent environment for the creation and use of ICTs);

- readiness (based on how each country is ready regarding infrastructure, affordability, and skills);

- usage (based on the adoption of innovations and use by the government, private sector, and individuals);

- and impact (based on the economic and social implications of the ICTs).

Each of these subindexes is related to indicators such as political and regulatory environment, business and innovation environment, infrastructure, affordability, skills, usage (individual, business and government) and impacts (social and economic) (World Economic Forum and INSEAD, 2016: xi).

The global NRI ranking shows that the most advanced economies are the ones which also should have better innovation environment, policies and positive impacts on people well-being regarding ICTs access and use. Table 6 compares the first ten countries ranked in the GIT 2016, followed by the next ten higher ranked countries from Latin America and the ten higher ranked countries from Sub-Saharan Africa. This combination of data to shows how far are some emerging and developing countries from 'being ready' for the ICTs' development.

TABLE 6: NRI top ten rank, with the ten first Latin American countries and the ten first Sub-Saharan Africa countries.

Rank	Country	Value	Rank	Country	Value	Rank	Country	Value
Advanced Economies			**Latin America**			**Sub-Saharan Africa**		
1	Singapore	6.0	38	Chile	4.6	49	Mauritius	4.4
2	Finland	6.0	43	Uruguay	4.5	65	South Africa	4.2
3	Sweden	5.8	44	Costa Rica	4.5	74	Seychelles	4.0
4	Norway	5.8	55	Panama	4.3	80	Rwanda	3.9
5	U.S.	5.8	67	Trinidad y Tobago	4.1	85	Cape Verde	3.8
6	Netherlands	5.8	68	Colombia	4.1	86	Kenya	3.8
7	Switzerland	5.8	72	Brazil	4.0	99	Namibia	3.6
8	U.K.	5.7	76	Mexico	4.0	101	Botswana	3.5
9	Luxembourg	5.7	82	Ecuador	3.9	102	Ghana	3.5
10	Japan	5.6	83	Jamaica	3.9	106	Côte d'Ivoire	3.4
World Economic Forum and INSEAD, 2016 :16)								

5.2.2 Uruguay and the ICTs

To narrow this research Uruguay was selected due to two main reasons. Firstly, as Uruguayan, this author can be either critical or confirm the picture that the international and national reports related to the ICT development show. Secondly, Uruguay is one of the most connected countries in Latin America, not only because according to the NRI Uruguay is the second country in South America with a better readiness for ICTs development, but also due to policies related to

the telecommunications and universal access to Internet, which would be presented in this section.

5.2.2.1 Uruguay's Network Readiness level

According to the NRI, Uruguay had an inconsistent evolution over the last fifteen years. Chart 2[7] shows a comparative growth between Uruguay and the countries with highest levels of Readiness at the first year of the GRI report. Although this research is not able to determine which factors were involved in the countries' ups and downs; in the case of Uruguay, there are some assumptions about economic crises and public policies regarding ICTs promotion that could be the explanation of its NRI evolution. For example, during 2002 until 2005 there was a severe financial crisis which affected the whole country (Antía, 2013; Garcé, 2012). In 2005, a new government changed the paradigm of the previous administrations and promoted the economic growth with the ICTs development as a national policy (LaRed21, 2005; Parlamento del Uruguay, 2007). Therefore, there were several policies and government programmes which enhanced the access to ICTs for the whole population; for example, the Plan Ceibal[8] in 2006 and the Agency for Electronic Government and Information Society (hereafter AGESIC) in 2007 (Ceibal, n.d. b; AGESIC, 2009) that would be presented in the following section.

---

[7] According to this chart, a lower level is a better level of Network Readiness, because it shows the place in the ranking, being 1 the country with the best Network Readiness. Even though the countries with the better level today have changed, the table shows the evolution of the ones which were in the top five position in 2001, to observe their evolution and compare them to Uruguay.

[8] The *Plan Ceibal* was the Uruguayan version of the project "One Laptop Per Child" of Nicholas Negroponte. Uruguay was the first country which had universalised the project in the whole territory.

CHART 2 – Evolution of Network Readiness Index for Uruguay and the Top Five economies identified in 2001 – 2016.
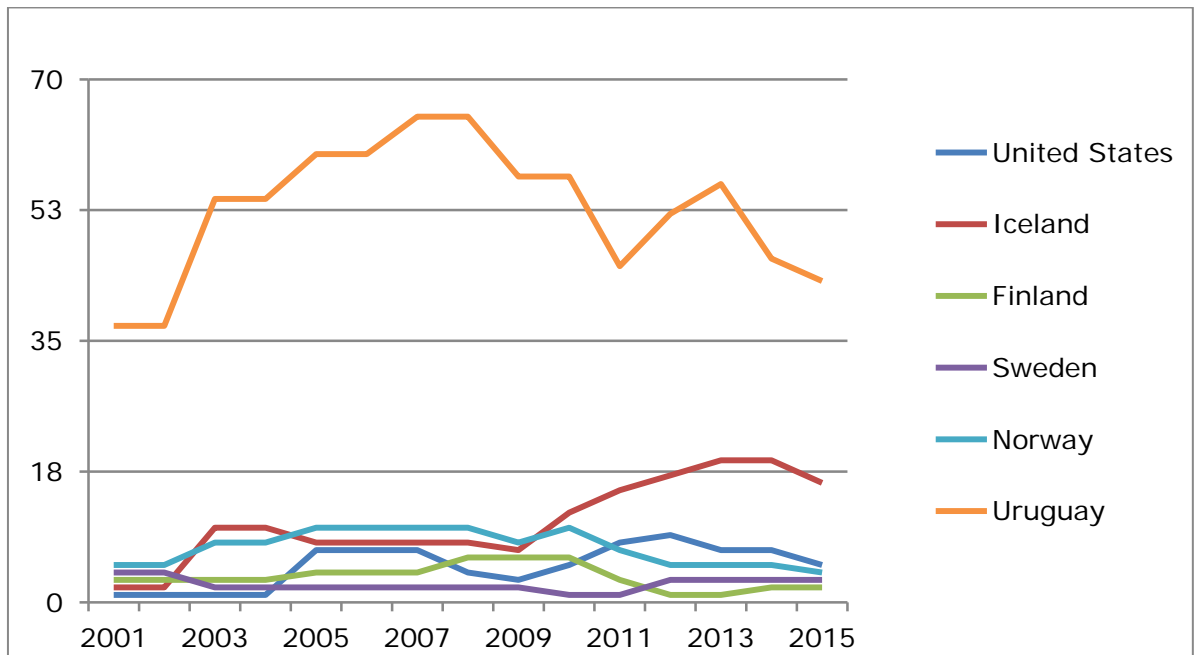
(World Economic Forum and Harvard University, 2002; World Economic Forum and INSEAD, 2004, 2009, 2011, 2012, 2013, 2014, 2015, 2016)

Chart 3 shows the evolution of 'Internet access', the 'Mobile penetration' and 'Mobile-broadband subscription', showing a consistent growth throughout the past decade[9]. The data show a growth from 2001 until 2015, from 12% to 60% of the national population with access to the Internet[10]. Even though this increase is significant, the sharpest growth is related to mobile phone access, starting from 13% in 2001 to 161% in 2016. This growth of mobile technology reached almost all the population, with more than one cell phone per person. Regarding the mobile broadband subscriptions to access the Internet through the cell phone, this report

---

[9] This research is focused on the individual usage to understand how people are accessing and using the ICTs. Therefore, there will be analysed the 'Internet access' and the 'Mobile penetration' and 'Mobile-broadband subscription' as indicators for the usage. This definition is made based on the national reports available which share the same indicators that can allow some generalisations regarding the ICTs access and use in Uruguay.

[10] The gaps between the years 2005-2006 and 2009-2010 respond to the lack of information available online.

included this indicator in 2012, with a rapid increment in Uruguay, from 10% to 60% in only four

years, reaching the total Internet users.

CHART 3 - Evolution of ICTs' access in Uruguay

(World Economic Forum and Harvard University, 2002; World Economic Forum and INSEAD, 2004, 2009, 2011, 2012,
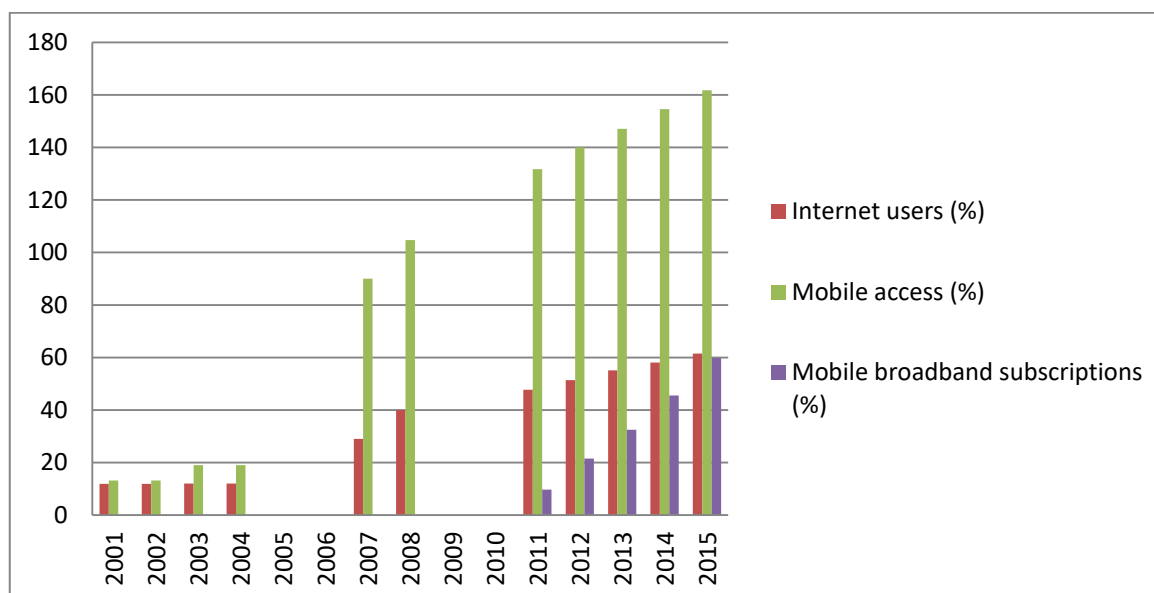
2013, 2014, 2015, 2016)

5.2.2.2 Internet access and use

On the other hand, the Uruguayan Internet User Profile (hereafter UIUP) made by Grupo Radar

shows the Internet users in Uruguay (see Chart 4), according to the UIUP from 2001 until 2013,

and the executive summaries from 2014 and 2015[11].

---

[11] Grupo Radar is an Uruguayan independent statistic studio that makes the Uruguayan Internet User Profile. Since
2001 until 2013 it provided this research without cost. Since 2014 it started to charge for the full report, but it
provides the executive summary with the most relevant data, available online.

CHART 4 – Uruguay's evolution in Internet Users

Uruguay Internet Users (%)
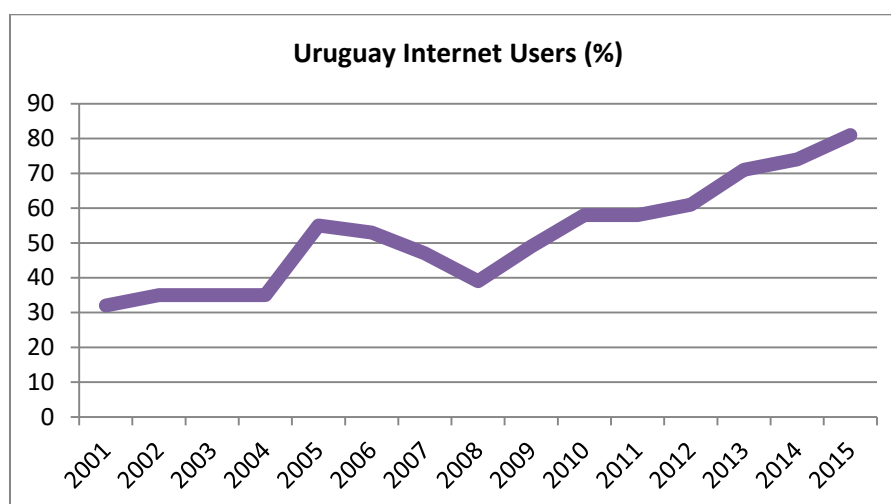
(Grupo Radar 2001, 2002, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2015)

Regarding Internet Users in Uruguay, this chart differs with the GIT's chart showing a discrepancy in the evolution from 2005 to 2007. However, indicators from different sources cannot be compared, due to both reports are independent of each other, and they could be done taking into account different factors. Nevertheless, the important information from both charts is the overall increment of Internet users, even though in the international report is 60% and in this national report is 80%.

Moreover, as a third source, the Statistics National Institute (hereafter INE) and AGESIC made in 2010 and in 2013 two surveys regarding the access and use of ICTs in Uruguay. Even though these surveys used different samples[12] it is still a useful tool to know more information concerning the access and use of ICTs. According to this report, in 2013 the 64.7% of the urban

---

[12] Grupo Radar used a sample between 1,700 and 1,800 individuals which represented the whole population over 12 years old; INE and AGESIC used a sample of 6,228 people, over six years old, living in urban areas, in cities with a population over 5,000.

homes had access to the Internet in their households (AGESIC and INE, 2013). From the income quintiles perspective (see Chart 5), in 2013 there were 37 points of difference between the lower and the higher income quintile. However, this difference was higher in 2010 (41.9 points) showing growth in the lowest-income quintiles.

CHART 5 – Households with Internet access per income quintile, comparison 2010 and 2013.

Households with Internet access (%)

■ 2010 ■ 2013

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
2010	21,9	39,3	47,5	52,2	63,8
2013	45,1	61,1	64,2	79,8	82
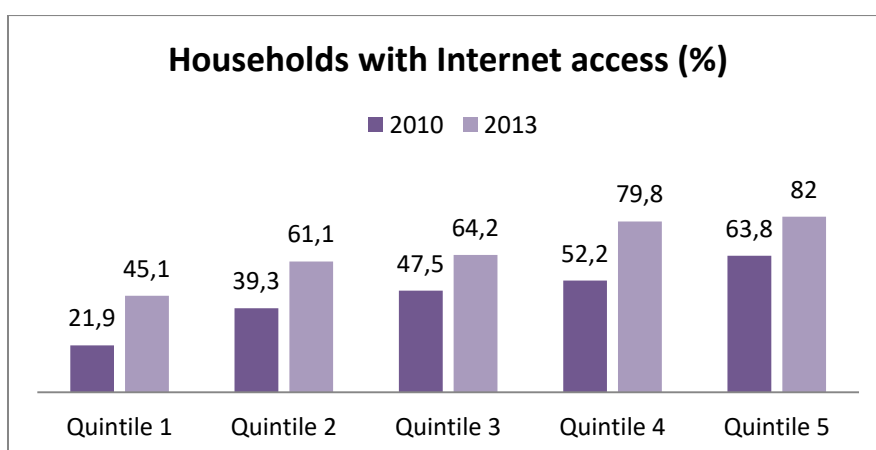
(AGESIC and INE, 2010, 2013)

The reasons expressed regarding the lack of connection was the lack of interest (52%) followed by the highest costs (44%), and the access via other places (16%) (AGESIC and INE, 2010, 2013).

5.2.2.3 Mobile access and use

Concerning mobile phones access, GIT reports showed a relevant growth from 2007 with 90% to 2015 with 161% (Chart 3). The national report of Grupo Radar included the mobile access in 2012 regarding the access to Internet using mobile phones or tablets (20%). This percentage grew in 2013, with 33% of the population over 12 years old using mobile devices; either phones or tablets (Grupo Radar, 2013). In the last report, the connections via mobile devices reached the

72%. In only five years the Internet mobile phones users grew[13] from 210,000 to 1,600,000 individuals; in a country of a total population of 3.4 million people. According to Grupo Radar's latest report, access to smartphones had multiplied by 13 in the last three years, with 1,580,000 users in 2015.

In comparison, the AGESIC and INE surveys show that there is a widespread use of mobile devices in the urban areas, with 88% of users, throughout all the socio-economic strata, from the lowest income levels (quintile 1) with 76.2% of the highest income strata (quintile 5) with 88%. Chart 6 shows a comparison between the survey made in 2010 and 2013. While the first survey asked about mobile phones access, in 2013 the assumption was that more than 96% of the population had already accessed to any cell phones, and therefore the consultation was only about smartphones or tablets. Even though the percentage is lower than the use of mobile phones in 2010, the relevant information of this chart is that the access to smartphones is similar throughout the five income quintiles (AGESIC and INE, 2013).

---

[13] Regarding the use, 'chatting' and 'using social media' are the most expressed use with mobile devices (89%), followed by the using of browsers to search information (72%) and to send/receive emails (49%) (Grupo Radar, 2015).

CHART 6 – Mobile access per income quintile (%)

Legend: ■ 2013 - Smartphones ■ 2010 - Mobile phones

- Quintile 5: 44,7 (2013 - Smartphones); 88 (2010 - Mobile phones)
- Quintile 4: 36,6 (2013 - Smartphones); 84,7 (2010 - Mobile phones)
- Quintile 3: 31,7 (2013 - Smartphones); 79,2 (2010 - Mobile phones)
- Quintile 2: 24,9 (2013 - Smartphones); 78,2 (2010 - Mobile phones)
- Quintile 1: 22,8 (2013 - Smartphones); 76,2 (2010 - Mobile phones)
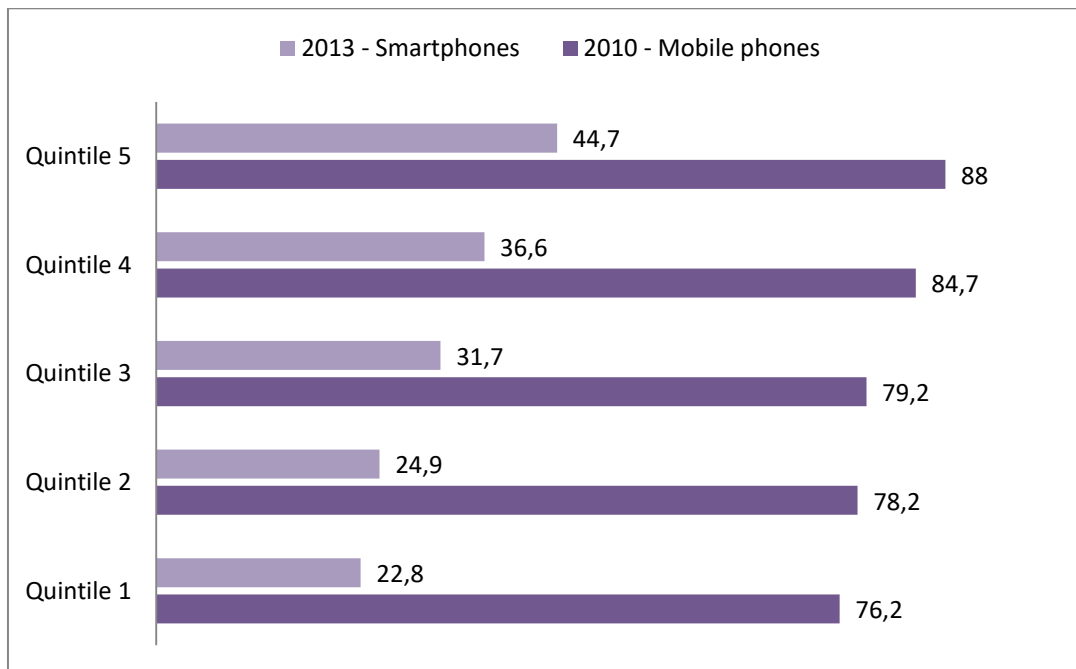
(AGESIC and INE 2010, 2013)

5.2.3 Uruguayan policies promoting ICTs

Uruguay leads the ranking in Latin America regarding E-government (United Nations Department of Economic and Social Affairs, 2016). To reach this position the country passed through certain steps toward e-government, its main step was made in 2007 with the creation of AGESIC[14] (World Economic Forum and INSEAD, 2013). Chart 7 shows that 2007 was a key year for the evolution in the access to the Internet in Uruguay.

What made Uruguay grown in the ICT development was the combination of three factors: 1) the Presidential support for the prioritization of the transparency and efficiency; 2) well-qualified

---

[14] The aim of AGESIC is to lead the e-government strategy, to create an efficient state, focused on the citizen, and promoting the Information and Knowledge Society for the social inclusion and government transparency through the new technologies (AGESIC, 2009).

project leaders regarding ICTs knowledge; and 3) the promotion of the ICTs development by local industry, which allowed this sector to increase the Uruguayan technology exports from US$50 million in 2000 to US$225 million in 2010 (World Economic Forum and INSEAD, 2013: 132).

CHART 7 – Evolution of the access to Internet (%)
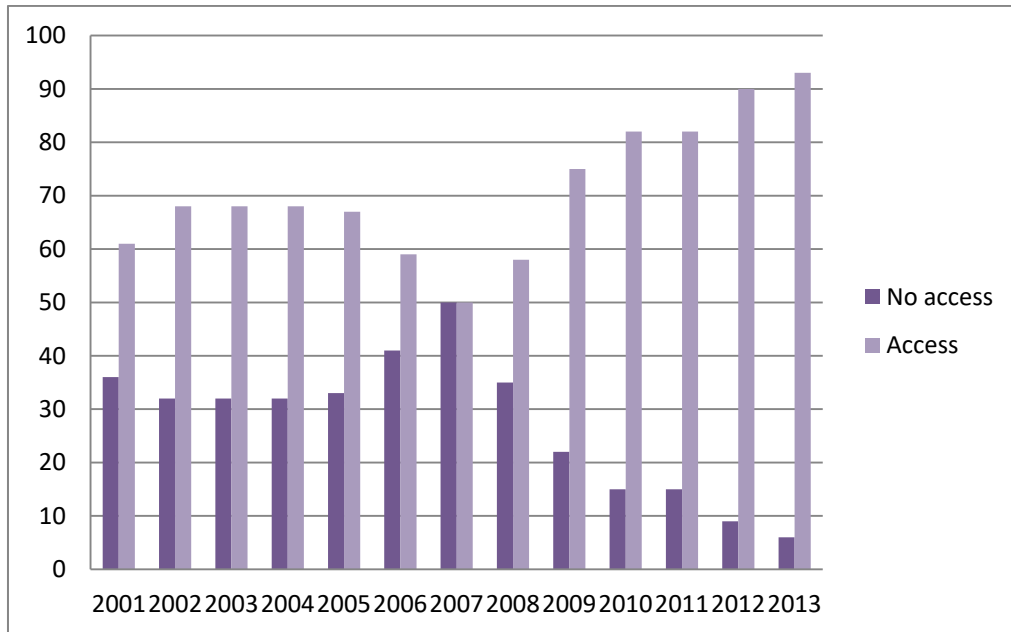
(Grupo Radar 2001, 2002, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2015)

These policies involved the new institution related to ICTs (AGESIC) with other organisations of education and telecommunications, to create educational plans and policies to universalise the Internet access, with the support of the whole Executive Board of the Government and the rest of the political parties. For example, the 'MEC Centres'[15] are public educative and cultural places for social integration and citizen participation (Centros MEC, 2013).

---

[15] Centros MEC were created in 2006 by the Ministry of Education and Culture. They are located in small towns and villages, the aim of facilitating access to education, innovation, technologies and culture, promoting equal opportunities. MEC is the acronym for the Education and Culture Ministry, and it gives the name to the *Centros MEC: MEC centres*.

One of the main programmes was the Educational Connectivity of Basic Informatics for the Online Learning (Plan CEIBAL[16]) which provides laptops and technical maintenance to all the children and teachers attending public school (see Image 1).

IMAGE 1 - Picture of the last public school receiving Ceibal laptops *"Ceibalitas"*

(Secretaría de Comunicación de Presidencia de la República, 2009)

However, this is not only a programme regarding technology provision; Ceibal is a programme related to social inclusion, equal opportunities, which promotes a teaching and learning processes (Martínez et al., 2010). Even though addressing the technology access gap was the first step in this programme, it is based on the Warschauer (2003) idea about the provision of technologies as just one step in the path towards social inclusion, but not the only one. Having a computer is useless if the person cannot do anything with it, either due to the lack of knowledge

---

[16] http://www.ceibal.edu.uy/

of how to use it, or the lack of purpose to use it (see Box 8). The evolution of this plan is to address digital inclusion for more elderly population, providing tablets and digital literacy courses throughout the Ibirapitá Plan[17]. Up to date, this programme gave more than 50,000 tablets (Ibirapitá, 2015). Besides, in 2012 the state telecommunications company launched the universal Internet access for all the households, with 1 gigabyte without cost which at least allows people to check emails and other essential Internet use. This company it is also installing optic fibre in all urban areas for more speed and data use (Secretaría de Comunicación de Presidencia de la República, 2012).

BOX 8 – Ceibal Plan

Ceibal is based on three key points: 1) effective pedagogy; 2) knowledge and leadership for change; and 3) technology as learning accelerator. The aim is to transform the educational system into a development environment through which teachers and students can develop their skills and interests, being an activator for the knowledge generation (Brechner, 2015). In 2016, Ceibal gave more than 600,000 laptops and tablets, for pre-school, primary school and secondary school for the public system; to children and teachers.

This programme had installed WiFi spots in schools, high schools and public spaces all over the country, allowing free access (see Figure 4). It also promotes learning areas such as Maths or English language, through a new platform which add to the traditional learning the interaction with the global world, the interconnectivity and the online learning process (Ceibal, n.d).

---

[17] www.ibirapita.org.uy

FIGURE 4 – Ceibal Connectivity Map
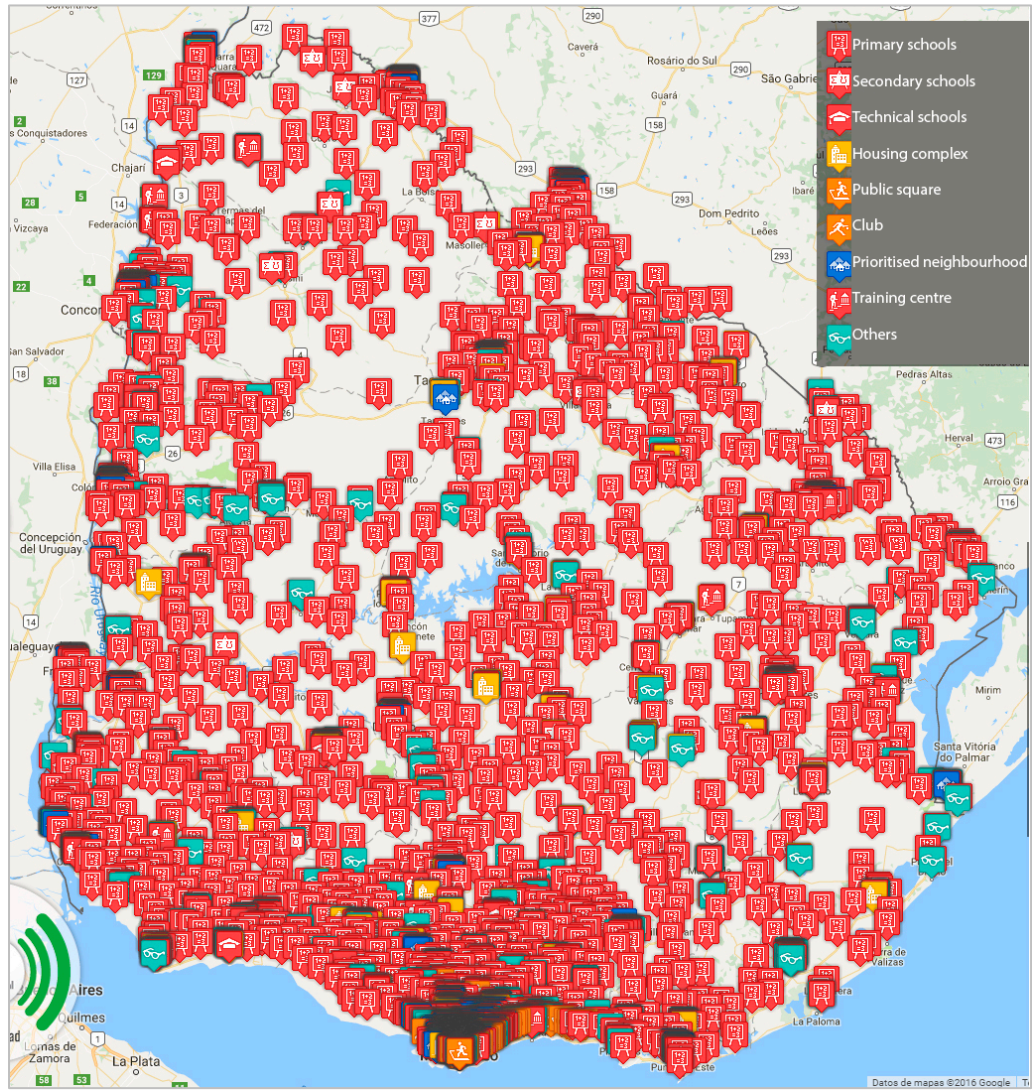
(Ceibal, n.d)

5.3 Discussion: Is it ICT access the key to the Fourth Generation of EE contents?

According to the information provided, there are two main concepts to discuss: firstly, the access to ICT itself and what be 'connected' or 'disconnected' means; and secondly, what are the options for the production of EE contents for those connected, and the alternatives for the disconnected. As Everet Rogers (1995) pointed out, innovation is an idea, practice or an object that is new for an individual. Thus, even though the Internet was one of the most relevant innovations of the last century, which shaped the evolution of technologies related to the information and communication, yet it is not achievable for most of the global population, and it could be considered as a not-so-widespread innovation. However, even though in the countries with connectivity and ICT development, the innovation does not mean only the access to the technology itself, but the kind of use of it, and the sense making of the user: how to use it, what use it for, and why use it?

In consequence, being or not being 'connected' is a relative concept due to the access to the technology is not a guarantee of the type of use. Warschauer (2003) criticises the division between the 'connected' and the 'disconnected', also known as the digital division, and he argues that the division is wrongly defined by who access to the technology and who cannot. He clarifies that providing technology is not the solution for development. Therefore, if there is no purpose for the use or no strategy for the skills development, the access to technology is not enough to guarantee to be part of the technology community. Thus, it is important to remind that the GIT report includes in its index factors that go further than the ICT access, such as the government promotion, the creation and use of technologies, the social and economic impacts, apart from the infrastructure, affordability and skills. However, the reports provide rankings

without explanations for the indicators. Therefore, the only comparison available is the evolution of each country, but not knowing the causes of that growth. Besides, the use of documents which represent the point of view of Western institutions is also an element to discuss. How reliable is the data provided by sources such as World Bank, United Nations or the World Economic Forum, even though they say they are independent. Thus, critical thinking about who are 'connected' and who are 'disconnected' needs to include the reflection of the source of that information, as well. However, the reliability of the document available online is a subject that cannot be taken into this research but is important to present it as a limitation.

On the other hand, the information available through reports made in Uruguay is based on the access and use, showing the quantitative evolution of the access to computers, mobile devices and the Internet (amongst others elements) for those who effectively access to the technology. As Warschauer emphasises, the access has to do with economic, institutional, cultural, political and linguistic definitions of what the Internet means to people, and therefore the inequality between the 'connected' and the 'disconnected' is not a problem of infrastructure, but a social issue.

At the beginning of this research, the problem statement was presented as an opportunity instead, due to the assumption that ICTs provide benefits to creating, producing and broadcasting an audiovisual content. However, after the reflection about the 'connected' and the 'disconnected' world, or what means to have access but not a proper use of the technologies, the reflection regarding this second objective is how can individuals with access to ICTs can be empowered to tell their stories to provoke social changes. Even though having access to technologies and the Internet, what is the motivation of any individual or any NGO to use this

methodology to address social issues? Taking into consideration the data analysed, the Ceibal methodology could be a model to promote the production of contents from the community grassroots. Education and participation in the use of technologies could be the key to promoting this methodology as a way of expression.

Considering that most of the global and vulnerable population is 'disconnected', it seems to be more important to have a good EE production of contents than good ICTs to broadcast that message. As Gumucio-Dagrón (2002) explains, in Communication for Social Change it is more important the process with the community than the product for the audiences. Thus, this reduces the scope of content production and broadcasting to the community involved in the particular social issue. As was presented in the Literature Review, the audience is fragmented in millions of small groups of receivers (Napoli, 2010). If the community is part of the 'connected' or the 'disconnected', it is the job of the Fourth Generation of EE to address both with different formats to include the 'disconnected', as well. That connection could be addressed through the combination of various media and storytelling narratives, which would be presented in the following chapter.

5.4 Emerging findings

To conclude this chapter, regarding the ICT influence in the creation of EE contents, can be identified the following findings:

- Even though Internet access and use are growing fast, it is still not reaching the poorest population in the low-income economies, excluding the 60% of the global population of the information and knowledge society.

- However, access itself does not guarantee the use. There is population that, even having access to the ICTs, does not know how to use it or Internet does not make sense for their lives. There are, also, those who choose to not being part of the connected world.

- Reports and indicators can provide a picture about a subject, but it cannot tell qualitative data about the people included in that data. The reports also could be biased by the institutions' interests.

- National policies working across the organisations related to the information and knowledge society can promote the learning-teaching process regarding ICTs to enhance the social and digital inclusion.

- Participatory interventions could address not only the education for the ICTs' use but also the promotion of the EE interventions as a methodology for NGOs or group of activists to put a subject to discuss and debate.

- The process of EE production of contents is more important than the product itself, due to the analysis of the topic is part of the discussion and the reflection within the community involved.

- Finally, the Fourth Generation of Edutainment should address 'connected' and 'disconnected' people, with different formats and storytelling narratives through transmedia strategies.

6 Objective #3: "To analyse basic storytelling concepts and formats, and its possibilities throughout transmedia strategies"

6.1 Introduction

This chapter would review the third objective of this dissertation: "To analyse basic storytelling concepts and formats, and its possibilities throughout transmedia strategies". Different media and new technologies allow the audiences to be part of that process, as producers and consumers, being 'prosumers' (Jenkins, 2014).

Participatory storytelling is a methodology that involves a group of individuals in the development of a narrative that it belongs to them, and therefore, it creates a bond, an engagement that could build awareness and promote social change (Colton et al., 2006). With the media available, and the storytelling process in a participatory intervention, audiences could convert into authors and promote their own social agenda. The following sections would review some formats and media, and the Discussion section would analyse their potentialities as part of a Fourth Generation of EE contents.

6.2 Data analysis

6.2.1 Participatory storytelling

"Almost as long as there has been human language, people have engaged in storytelling" (Agosto, 2005:n.d.), some of them written, others passed through generations as oral traditions, and some of them still survive, such as the Grimm brothers fairy tales. Telling stories is a way that human beings created to make their experiences meaningful as they "are the material and

the cultural product of memory" (Scott, 2001: 205). Even though the act of telling a story looks like a simple process, it also a powerful tool to provoke emotions and insights, connecting individuals, sharing experiences and reflecting the culture creating bonds. And when storytelling became a participatory process it can have an effect in shifting attitudes and behaviour, understanding, and empathy (Colton et al., 2006).

As it was explained in the previous chapters, traditionally EE interventions were produced using soap operas broadcasted by TV or radio, which reached audiences of millions of individuals. However, there are plenty of formats and media that can be useful for a Fourth Generation of EE contents, focused in less big audiences but promoting participatory process of storytelling, instead. Through the participatory storytelling the community can identify local issues through narrative about their culture and traditions, promoting the discussion and debating within the community regarding the problems identified (Colton et al., 2006).

According to these authors, a participatory storytelling process should be created throughout a positive narrative based on the expectations of the participants about the final product, with a clear vision about the aim of the story. It also needs to be based on reality and research behind the narrative and the characters, in order to be credible. If it imagines a future situation, it also needs to be based on facts, in order to create the feeling about that future as something achievable. Colton et al. (2006) suggest making the story energizing promoting a call to action to the viewers and the producers. The process is as important as the final product, but this product also need to promote action and reflection for future viewers. Box 9 presents two examples of EE contents which include the community in the storytelling writing process.

6.2.1.1 Storytelling formats

There are different ways to tell a story, the most common is the fiction or drama story. Most of the Western drama is based on Greek theatre (Carlson, 1985). First EE contents were featured as drama stories with positives and negatives roles to teach the audiences about the social sanctions and retributions for their actions (Bandura, 2003; Sabido, 2003; Tufte, 2009). However, there are also other forms of expression that can be useful in an EE production, such as folk theatre, filmed documentary, drama-documentary, life stories, news reports, or the opinion of common people selected randomly in the streets. Table 7 presents their main characteristics of each one.

Moreover, as Gumucio-Dagrón (2002) and Tufte (2004, 2005, 2009) pointed out, in order to promote change, process are more important than the product, and more important in participatory interventions (Cardey et al, 2013). Video for Development is a methodology that use video making to promote social change (Witteveen, 2009). Thus, this author proposes the use of media to promote change as an informal education using visual learning strategies such as Visual Problem Appraisal (VPA) and Embedded Filming. This author suggests filming the process to identify 'wicked problems' which are the issues in which there is no good or bad side, true or false solution. As every individual see the problems through their own eyes and shoes, there can be problems that are framed in a different way which needs to be reflected, problematized and worked out. She adds that, and that process of meeting 'the other' helps in promoting social dialogue and contributing to problem analysis.

TABLE 7 – Some storytelling formats that can be used in participatory EE interventions.

Format	Characteristics
Soap Opera	Named as the original sponsor in the US (soap manufacturers), it is a serial broadcasted by TV or radio, in which a same group of characters deal with daily events. Like every story, it has an introduction to the characters and their stories, challenges to pass and a resolution (Oxford University Press, n.d.). They are popular and can reach big audiences (Singhal and Rogers, 2003). Soap operas have the potentiality to create the identification of the audience with the characters, following them as role models, and it can articulate emotional and social engagement (Tufte, 2009).
Folk theatre	It is a drama expression, which takes place in public spaces as a way to dramatise social and political issues. In a participatory intervention include workshops to involve the community in the representation of the social issue to address (Melvine, 2007). The Red Megaphones was a theatre group in Manchester founded during the 30s', as "a propertyless theatre for the propertyless class" (Melvine, 2007:14). However, these expressions of protest vary by country and culture. For example, since the beginning of the XX Century, as part of the Uruguayan Carnival, the *tablados* were open stages in different neighbourhoods, built by the community. The *murgas* was the group which acted in the *tablados*, as troubadours, claiming for social and political issues in a humoristic way, using drama and songs (Alfaro and Ibarlucea, n.d.; Ministerio de Turismo, n.d.).
Documentary	It is a film which presents factual information about a topic. Even though it presents different arguments and evidence regarding a subject of the real life, documentaries also present a director's point of view, which aim is to persuade the audience to adopt an opinion regarding a subject (Bocconi, 2006). This author explains that there are different approaches for this format: • a single point of view through which the story is told by one character who is the major protagonist of an event; • a multiple points of view from multiple characters, all of them with the same relevance for the story; • an omniscient point of view when the story is told by an external person who knows and sees everything; • and a reflexive point of view through which the process of film making is shown as the story itself.
Drama documentary	Between drama and the documentary, there is the drama-documentary or *docu-drama* which was considered controversial during the 60s' and 70s' due to there were mostly about political content and social issues.

	It combines real facts in fiction stories, characterised by actors who has to play as another real person (Goodwin et al., 1983; Goodwin, 1986). The controversy is now ended, and there are several productions of biographic and historical films which can be considered as drama-documentary.
Life stories **Testimonials** **Families stories**	As a documentary but focused on a person's or group of people's life, this kind of film are also called 'talking heads documentaries' or record testimonies and is based in filmed interviews (Bocconi, 2006). Life stories allow audiences to know about a subject from the voice of real witnesses of that topic.
Vox Populi	*Vox Populi* (form the Latin 'people's voice') is the production of a video sequence through which people, randomly selected in the street, are asked about the same one or couple of questions. It is a rhetorical dialogue which presents controversial topics, most of the time regarding an issue with two perspectives. However, it can be produced with some bias, presenting the answers in a particular sequence according to the film director's interests (Bocconi, 2006).
Citizen journalism	With the uprising of the ICTs news can be provided by the citizen, through mobile phones directly to radio and TV shows, or through social media networks, people can inform, make claims or express their opinion about social issues (Rosales, 2013).
Visual **Problem Strategies**	Visual Problem Appraisal (VPA) is a film based methodology of designing and filming interviews in order promote analysis and social learning regarding local issues, told by their main characters who express their concerns. The aim of this methodology is that the user watches the interviews to identify the problems, the power relations and the tensions amongst the people interviewed. A different strategy is the Embedded Filming which involves the stakeholders also in the process of production and the filming, combining the research with the learning process. (Witteveen, 2009).

Thus, in order to create contents for the Fourth Generation of EE interventions different formats can be used, mostly can be enriched with the ICTs, such as in the production of home-made video filming or in the broadcasting and dissemination through social media networks, which would be delve in the following section.

6.3 Transmedia and storytelling

As was presented in previous chapters, transmedia is the process through which each media provides the best of itself in creating part of a story, and together all media build an experience for the audience that goes further than the story itself (Jenkins, 2006). Moreover, transmedia storytelling happens when the audience of that content participates in the creation of the story as well. This could be possible through the participation in forums, creation of games, development of new lateral stories related to the main story. 'Audience' and 'users' are words that now are combined into the concept 'experiencers' of the entertainment (Coelle et al., n.d.). For the youngest generations, the use of several platforms at the same time is something natural, combining books with games, comics or movies, and it also presents a potentiality regarding new ways for education (Dudacek, 2015). The question is: ICTs are only for digital natives, or their benefits can also be taken for older generations and 'the disconnected' individuals?

6.3.1 Media for participatory storytelling

Traditional media, such as TV, radio, newspaper or other print media (leaflets, posters, and books) are still very effective in disseminating information (Mefalopulos and Kamlongera, 2004). As radio did not die when television came out, Internet did not push aside the traditional media. Instead, all media converge in presenting a different aspect of the same subject (Jenkins, 2006). However, each media has its potentialities and limitations. For example, while visual media create more interest and retention in audiences' minds, audio contents allows the audience to do several things at the same time, not needing the whole attention as the visual medium requires. And even though print media can provide explanations and straightforward messages,

they require people's time and comprehension, difficult for illiterate communities (Mefalopulos and Kamlongera, 2004).

Moreover, with the ICTs uprising more options were developed to reach audiences. Mobile phones had been an exponential growth all over the world (World Economic Forum and INSEAD, 2016) reaching rural communities providing them with a cheap communication channel which can be used by radio shows to promote dialogue and shared knowledge (Pafumi, 2014). This author emphasises that when radio, mobile phones, ICTs and local knowledge are mixed in a strategy, it can empower communities, especially marginalised groups, to make them visible and to allow them to interact with the radio programme asking questions and receiving feedback. Likewise, the Internet offers the capability to interact, through social networks, forums, blogs, microblogging, podcasts, videos and pictures, expanding the communication across the connected world (Acunzo et al., 2014).

However, there is no best medium and no recipes for media combination for a participatory strategy. Different methods can work for different objectives, and sometimes the best option might depend on how media are mixed (Acunzo et al., 2014). According to these authors, a transmedia campaign could reach different stakeholders, reinforcing the message from different perspectives and creating a synergy between communication strategies. Table 8 shows some of the media that can be useful in the creation of EE contents to address social issues, with their particular potentialities and limitations.

TABLE 8 - Media's potentialities and limitations.

	Potentialities	Limitations
Television	Is a prestigious, appealing and persuasive media. It can provide a wide coverage.	Sometimes TV network are monopolised by powerful interests. It is not always available in rural areas. It requires a device that could be expensive (a TV). Production it is also expensive. Requires skills in broadcasting and programme planning, designing, production, and management.
Radio	It has wide coverage and it is available in rural areas. Radio receivers are cheap. Programme production is cheap and easy. Many local radio stations can facilitate disseminate local information. Audience is well segmented. Audience can do several things at the same time that listen to a programme.	Is weak for training. Visual images are more powerful than sound. It requires batteries that can be difficult or expensive to buy. Weak in catching and maintaining audience's attention. Requires skills in broadcasting and programme planning, designing, production, and management.
Video	As TV, is attractive and highly persuasive. It is cheaper to produce. Allows more than one language to be recorded as commentary on single tape. Does not need a TV network to be broadcasted and it can be played more than one time. Can be shown in daylight using battery-powered equipment. It can be uploaded and sheared through Internet.	Requires talent, skill and experience to produce programmes with good quality. Requires expensive elements, such as camera, lights, microphone to record with good quality. Requires a video player and a monitor to be reproduced. To upload to a website requires access to Internet. Requires the knowledge about how to upload and share it.

Audio podcasts	As video, the audio podcast does not depend on a network to be broadcasted.	Requires access to audio recorder or mobile devices.
	It is easy and cheap to produce.	To upload requires access to Internet.
	It can be produced with regular audio recorders or mobile phones.	Requires the knowledge about how to upload and share it.
	It can be uploaded and sheared through Internet.	
Printed materials	Relatively cheap, simple and easy to produce when using basic printing formats and for large numbers.	Can be expensive if is printed in colours and in a small quantity.
	Can be taken home, consulted and kept as permanent reminder.	Poor understanding for illiterates, except for those with images.
		If there are no visual images, it can be difficult to catch audience's attention.
Comics	Cheap and simple to produce and use.	It requires understandable drawings.
	Good for training, especially in places with no electricity.	It requires printing.
	Images helps people recall and remember concepts better.	It could be considered for children and rejected by adult audiences.
Folk theatre, puppetry	It requires small capital investment as most of the resources needed are available in the community	Requires skilled crafting of development messages into the fabric of the folk media.
	Does not depend on external technology.	It requires actors.
	Useful to treat sensitive issues in a culturally appropriate manner.	It requires an attractive layout to call the audience to attend.
	It easy to adapt to a local culture, and can use local dialects.	It requires advertising to attendance.
	Can be easily understood by all members of the community.	
	Appeals at the personal level.	
Mobile devices (smartphones, tablets)	Capable of a variety of tasks such as sending and receiving messages, recording audio and visual images, playing video and audio files, browsing the Internet, and organizing files.	It can be expensive. May not be affordable in some communities.
		Limited information can be stored based on mobile phone's capacity.

		Compact and easy to use.	Dependent on electricity to charge the battery.
			Need Internet connection to take advantage of all their potential.
			Not widely available in some rural communities because of poor signal/ Reception.
			Privacy and confidentiality of information are at a great risk.
			It requires basic skills regarding Internet use.
Social media		Facilitates the exchange of information amongst stakeholders regardless of geographical boundaries.	May not be accessible/ available to some stakeholders (illiterate, elderly, rural people).
		Links all stakeholders.	It requires skills to operate the technology and to access the information.
		Encourages interactivity.	It requires a device connected to the Internet (computer, smartphone, tablets).
		Information can be easily uploaded and shared.	Technology required is expensive.
			Language barrier.

(Acunzo et al., 2014:106; Mefalopulos and Kamlongera, 2004:39-41; Pafumi, 2014:37)

6.4 Discussion: Any storytelling format and media works for the Fourth Generation of EE contents?

EE interventions used to communicate to large audiences in the past and evolved to smaller groups of receivers, using different formats and channels; and the main effect happened inside the audiences. Nevertheless, to promote social change in participatory interventions, the process is more important than the product (Cardey et al., 2013). As Colton et al. (2006) suggest a

participatory writing of a story could help in the creation of bonds, the promotion of culture and the critical thinking regarding a common issue that affects a group of people.

Regarding formats, soap operas are the most common way to promote education and entertainment. The argument and the characters give the audience the chance to think about themselves through the characters' adventures and misadventures (Sabido, 2003; Singhal and Rogers, 2002, 2003). But did the audience change their attitude following role models? Tufte's analysed EE interventions in Africa, Central and Latin America, and concluded that people not necessary change their behaviour following a character. However, if the audience is included in the process of the content making, at least it can identify power structures and reflect about tensions that are shaping their lives. "The core problem lies in a power imbalance, in structural inequality, and in deeper societal problems. Solutions are sought by strengthening people's ability to identify the problems in everyday life, and their ability to act -collectively as well as individually- upon them" (Tufte 2005: 166). Thus, the answer about the format of the story is not only about which one is better, but how it is created to promote critical thinking, discussion and debate.

A EE participatory intervention could use drama stories engaging people's participation in the script writing and in further focus groups to test the story and the characters. Although it needs professionals such as actors and editors, it can promote the participation of local actors and technicians as part of the project group. Another drama expression (and a cheaper one) is the folk theatre. This format can create a positive effect in the group of stakeholders as they will be part of the planning, writing, acting and promotion of the play. The play could travel to different cities as an itinerant theatre and extend the dialogue.

Documentaries also can be part of EE participatory interventions, as it is a format that allows to openly talking about a subject. People can be involved in the definition of the topic, planning, production and they also can provide their testimonies regarding their lives. Social injustices can be shown and claimed through this format. Likewise, drama-documentary can be a format to work in participatory interventions, through which the community can promote their culture and traditions, and show them to the rest of the world. On the other hand, citizen journalism can be developed as an EE participatory intervention, through which people can inform about news concerning their communities and show their picture of their realities. 'Arab Spring' demonstrated that the ICTs plus the social networks and the concept of sharing information can converge in citizen journalism, and allow common people transfer news more quickly and impartially than traditional media (Köroğlu, 2011).

Thus, it seems that any of these formats can allow a participatory intervention for the production of EE contents. Besides, Visual Problem Strategies can be used to promote social learning through these formats to help the debate. These contents' aim could be the reflection and the discussion about a social issue. If the story is created in the community, including the participation of the people involved in the social issue, the product should be appealing, attractive and interesting for that audience, and it can fulfil the goal to be educative as entertaining.

On the other side of the process is the channel to broadcast the final product. It was emphasised that the process is more important than the product; however, even though the final content is secondary concerning peoples' reflective change, it is also important to make the problem visible

for the rest of the community. Although it is important to promote participation, there are people that could not be part of it, maybe for limitations in time or even due to lack of interest. For those, it is important that the final product can be watched and experienced as well. Thus, any of the formats presented above can be part of an EE participatory intervention, and can even allow the most participatory type: self-mobilisation expressions. Furthermore, to avoid problems of lack of connectivity, access to Internet, TV or radio, the EE participatory intervention can create transmedia offline contents which expand the entertainment and educational experience. EE contents can be recorded to be broadcasted through TV or radio, but also different elements of the story can be disseminated through other media, online and offline.

According to Jenkins transmedia and digital media are part of the same equation. Thus, again, the question is: what is the option for the 'disconnected'? Are there transmedia options for the poorest communities, which have no connection to the Internet and the social media? How do the 'disconnected' expand their entertainment experience? However, a new generation of EE content, based on participatory interventions, can develop transmedia opportunities for 'the disconnected' as well, even though if it requires a facilitator who works within the community in their intervention. In this case, transmedia can also be addressed through different media, for example, folk theatre, comic workshops, meetings in different public spaces such as schools, community centres, social clubs, amongst others.

6.5 Emerging findings

To conclude this chapter, regarding the storytelling formats and media available for a new generation of EE contents, there can be identified the following findings:

- Even though traditionally EE contents were radio and TV soap operas, it is possible to address social issues with other formats, such as documentary, drama-documentary, citizen journalism, and also promote new learning process through Visual Problem strategies.

- For participatory interventions, the process is more important than the final product. Thus, a Fourth Generation of EE contents which promote participation and self-mobilisation should create stories within the community involved.

- There are several media that could allow EE interventions to produce the content, and also to create a transmedia experience, online and offline. The challenge is to mix them to not exclude the 'disconnected' audience.

- The change expected is the reflection of the power structures, tensions, through discussion and debates throughout the community. The process of creation a story can also be used as an opportunity to build bonds and reinforce culture and traditions.

7 Final discussion

7.1 Introduction

The aim of this discussion is to find the answer to the main goal of this research regarding the seed of the Fourth Generation of EE interventions. Therefore, this chapter would have three sections. The first one will resume the discussions and emerging findings of the three objectives proposed. The second one would go back to the Conceptual Framework proposed for this analysis and prove its functionality and limitations. Finally, suggestions for future research will be presented in order to keep studying and reflecting on the evolution of the EE contents.

7.2 Emerging findings

7.2.1 EE potentialities in the new development agenda, and the example of food loss and food waste prevention

The new development agenda promotes sustainability as a concept that leads the social, economic, political and environmental policies within the countries that agreed to the creation of the SDGs (United Nations, 2015). There are 17 Goals and 169 Targets which aims are quite valid and relevant to address in developed and developing countries. Thus, as an answer to the research questions and Objective #1, any of the 17 Goals can be addressed with EE interventions and the example proposed, about Target 12:3 proves that there is social and positive change that can be done in developed and in developing countries.

Part of the food waste and food loss responds to behavioural attitudes that could be addressed through CDSC initiatives, and through EE contents in particular. Therefore, to address the food loss and wasted topic, EE interventions could make a research regarding each actor of the value

chain, from farmers to consumers, and include them all in the discussion about what are their relationship with the food and what changes need to be done to the reduction of waste. Working together, the whole links of this value chain, interconnected, could help in the identification of power relations involved. Thus, a Fourth Generation of EE content should facilitate that dialogue amongst the actors promoting the self-identification of each actor's characteristics and roles within the value chain; and together could create an edutainment piece.

7.2.2 The ICTs' influence in the production of a Fourth Generation of EE contents

Regarding the 'ICTs opportunity' it is clear that the ICTs are not available for everybody, and even though the access can be solved, the use and the sense making behind that use is the key to identifying to take advantage of it as a baseline for the Fourth Generation of EE contents. According to the data analysed, Internet connectivity divided the globe in 'connected' and 'disconnected' people, excluding the 60% of the population of the potentialities of the ICTs. Thus, one conclusion is that the Fourth Generation of EE contents should provide options for both, the 'connected' and the 'disconnected'. Furthermore, even in the 'connected' world, not everyone is used to the technologies, perhaps due to the lack of knowledge of how to use them, leaving part of the connected population also disconnected.

Education and digital literacy need to be promoted to take full advantage of the ICTs opportunities and benefits. Likewise, the ICTs are part of an ecosystem that needs to be promoted, as well. Public policies encouraging inter-institutional programmes are the key to that promotion at a national level that creates a spillover to the rest of the society.

On the other hand, is important to recognise that technologies are not only related to the Internet. Mobile phones work very well in communities that are far from the urban areas and TV shows such as 'Shamba Shape Up' (mediae, n.d.) included their use for the participation of the audience, consulting and receiving relevant information about agriculture. Thus, the aim of the Fourth Generation of EE contents could also be the promotion of the work within the community, identifying social issues to address, and reflecting about the power tensions. The final product could be broadcasted through different formats to reach the 'connected' and the 'disconnected', as well.

7.2.3 Transmedia and participatory storytelling for the Fourth Generation of EE contents

In an EE intervention based on the process rather than the product, participatory storytelling could help in the definition of subject, characters and storyline, promoting the reflection about the topic identified. Tufte (2003, 2007) and Fuenzalida (1996) remarked that people do not necessary will change their behaviour following a character and a story, but when the character and the story are created by the people, there is at least a reflection of the tensions present in a community concerning social issues.

Regarding the type of story to promote social issues, this dissertation consider that any format (drama show, documentary, drama-documentary, citizen journalism) can be suitable for an EE intervention due to is more important the story production (the discussion, debate, reflection and critical thinking, filming, editing, defining the story) rather the final product itself. Likewise, any channel could be useful for the dissemination of the EE content, and the aim should be how to expand the audiences' experience and, particularly, how to create a transmedia strategy for the 'connected' and the 'disconnected'. Some of the audience could be a user of the social

media, but others may do not know them yet. For those who cannot reach the parallel stories created by the audiences, there should be an offline transmedia possibility involving different media, workshops and local expressions.

Moreover, with any story format and any media available, the Fourth EE Generation contents should start from the participatory storytelling to create the baseline that would become a community action of reflection, discussion and debate regarding a social issue to address. Self-mobilisation is the most participatory typology (Pretty et al. 1996), and maybe it is possible if the community has the needed knowledge and tools to carry it out. However, it might need the support in writing, filming, edition and budgeting that could be provided by an external or internal facilitator. The expected outcome should be the reflection and discussion about the tensions identified throughout the community, through the producing, watching and debating the EE content.

7.3 Proving the conceptual framework

Based on Tufte's identification of three generation of entertainment education field, this dissertation looked forward to finding the seed of a Fourth Generation of EE content, based on the use of ICTs and the audience participation through transmedia storytelling to address current social issues identified through the Sustainable Development Goals, as the new development agenda. This new generation of EE interventions was thought as a tool for NGOs and activists groups, users of the technologies, to promote and encourage social change in their communities. Thus, the first part of the framework analysed the three elements to find the potentialities and limitations towards a Fourth Generation of EE contents (see Figure 2).

FIGURE 2 - An Edutainment Fourth Generation Conceptual Framework

The SDGs
agenda

Transmedia
storytelling

ICTs access
uses and
connectivity

A 4º Generation of EE?
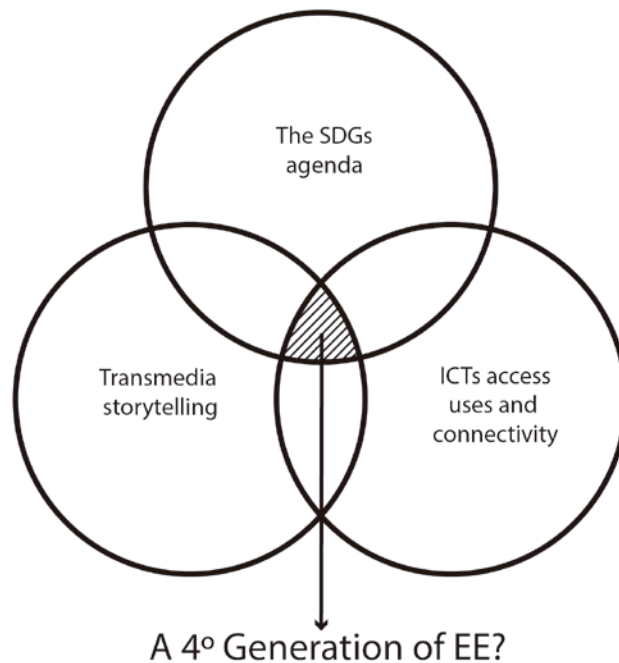
As a conclusion, there are some potentialities of this combination identified. First of all, regarding social issues, a new generation of EE interventions could go further than the traditional health subjects. Analysing one of the Goals, and discovering that there are behavioural attitudes behind, that could be addressed through EE interventions, it can be thought that there are other issues and goals of this new development agenda that can be addressed through entertainment and education, as well. This fact opens the scope to talk about other topics such as environment, innovation, clean energy, peace and sustainability, amongst other concepts.

Secondly, there was recognised the limitations of the ICTs access, use and Internet connectivity. ICTs are an opportunity for those who can afford them and know how to use them. However, for

the rest of the population who cannot access or simply ICTs have no sense for them, there should be interventions with the online/offline combination. Also, and thirdly, transmedia storytelling also needs to create opportunities for the 'disconnected', due to the combined use of different media expand the experience of the audiences and involved them into the message. It is a powerful phenomenon that needs to be possible in online/offline options.

Finally, it was marked that storytelling process should be participatory, involving the audience in the writing, filming, editing and broadcasting, through facilitation and education, but mostly through encouragement and empowerment of the communities. To complete this framework, the characteristics of the Fourth Generation of EE contents, based on Tufte's previous work and this research, could be as Table 9 shows.

TABLE 9 – Characteristics of the 4th generation of EE contents:

Entertainment - Education	The 4th Generation of Edutainment Contents
Definition of problem	Identification of power relations in a community. Reflection, discussion and debate.
SDGs problem addressed	Any Goal that reflect a social issue, with power relation influences and behavioural attitudes.
Notion of entertainment	The process is more important than the product, and it would include filming, acting, editing, and broadcasting workshops.
Notion of culture	Main characteristic of the EE content is culture and traditions.
Notion of catalyst	Transmedia is the catalyst. Internal community member with knowledge about EE, or external facilitator, NGO or group of activists.
Notion of education	Informal education. Learning by doing Reflection, discussion and debate.
Notion of audience	Audience are experiencers and transmedia storytellers.
What is communicated?	Social issues identified within the community.
ICTs minimum access	Access to cameras, mobile phones, computers and basic edition software (amongst other equipment).
ICTs minimum use	Basic skills. Workshops are part of the EE strategy.
Internet conectivity	For the 'disconnected' it requires an offline transmedia option.

Technical limitations	Quality of contents depends on the technical tools. Broadcasting in rural areas could be difficult.
Expected outcome	A participatory production of EE content which promotes the reflection and discussion about the social issue identified.
Duration of interventions	Medium and long term
(Source: Tufte 2005 and this author)	

7.4 Conclusions and further research

This dissertation was a theoretical research based on the review of literature and data available on the Internet. Therefore, the Conceptual Framework cannot be proved without practice in a real community, addressing a real issue identified by that community. Even though this was an exercise, it recognised the seed of a new generation of EE contents that should be analysed and studied in depth. EE interventions such as Shamba Shape Up, Contracorriente or Soul City already include some of the new technologies for the audiences' participation, for example, social media network through which other information is shared, and also apps to download contents of the series (Puntos de Encuentro, n.d.).

Also, it is necessary to create an EE intervention to test the participatory storytelling, in association with a local NGO or activist group, which allow the production of the EE content within the community interested in promoting a change regarding a social problem. Finally, further research should decide how to manage the division between the 'connected' and the 'disconnected' and what options can develop to create new experiences through transmedia strategies without excluding the disconnected populations.

8 References

Acunzo, M., Pafumi, M., Torres, C. and Tirol, M.S., 2014. *Communication for rural development Sourcebook*. Rome, Italy, Italy: Food & Agriculture Organization of the United Nations (FAO).

Adams, W.M., 2001. *Green development: Environment and sustainability in the Third world*. 2nd ed. New York: Routledge.

AGESIC, 2009. *Mision and vision*. [Online] Uruguay: AGESIC. Available at: <http://www.agesic.gub.uy/innovaportal/v/89/1/agesic/mision-y-vision.html?idPadre=33> [Accessed 27 August 2016].

AGESIC and INE, 2010. *Principales Resultados Encuesta Usos de las Tecnologías de la Información y Comunicación*. [PDF] Uruguay: AGESIC and INE. Available at: <http://www.ine.gub.uy/documents/10181/35933/Principales+Resultados+de+la+Encuesta+de+Usos+de+las+Tecnolog%C3%ADas+de+la+Informaci%C3%B3n+y+las+Comunicaciones+2010/fad55643-d5cb-43db-8a14-14baa808608c> [Accessed 25 August 2016].

AGESIC and INE, 2013. *Principales Resultados Encuesta Usos de las Tecnologías de la Información y Comunicación*. [PDF] Uruguay: AGESIC and INE. Available at: <http://www.ine.gub.uy/documents/10181/35933/Principales+Resultados+de+la+Encuesta+de+Usos+de+las+Tecnolog%C3%ADas+de+la+Informaci%C3%B3n+y+Comunicaciones+2013/504351ca-e277-4efb-82de-f2f70e9a4452> [Accessed 25 August 2016].

Agosto, D., 2005. Storytelling. [Online]. In B Cullinan & D Person (eds.). *Continuum encyclopedia of children's literature*. London, United Kingdom: Continuum. Available from: http://search.credoreference.com/content/entry/kidlit/storytelling/0 [Accessed 7 September 2016].

Alfaro, E., Ibarlucea, M. L., (n.d.) De la bacanal al escenario: consolidación del carnaval teatral en Uruguay. [online] Available at: http://s3.amazonaws.com/academia.edu.documents/44363162/Alfaro_Ibarlucea_Carnival_Symposium.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1473437516&Signature=BF4euLLk%2FJzc43RGRDapVFWSl84%3D&response-content-disposition=inline%3B%20filename%3DDe_la_bacanal_al_escenario_consolidacion.pdf [Accessed 8 September 2016].

Antía, F., 2013. Uruguay 2002: contagio, crisis bancaria y perspectivas.. *Íconos Revista de Ciencias Sociales*, 0(15), pp.145 – 153.

Balit, S., 2013. Communication for development in good and difficult times: Nordicom review. *Nordicom Review*, 33(Special Issue), pp.105–119 Available at: <http://dx.doi.org/10.2478/nor-2013-0029> [Accessed 16 May 2016].

Bandura, A., 2003. Social Cognitive Theory for Personal and Social Change by Enabling Media. In: A. Singhal, M.J. Cody, E.M. Rogers and M. Sabido, eds. 2003. *Entertainment-education*

and social change: History, research, and practice. United States: Lawrence Erlbaum Associates. pp.75 – 95.

BBC and Murphy, M., 2004. Triunfo de la izquierda en Uruguay. *BBC América Latina*, [Online] 1 November. Available at: <http://news.bbc.co.uk/hi/spanish/latin_america/newsid_3970000/3970591.stm> [Accessed 6 September 2016].

Bocconi, S., 2006. *Vox Populi: generating video documentaries from semantically annotated media repositories*. PhD dissertation. The Netherlands: Technische Universiteit Eindhoven. Available through: SIKS Dissertation Series <http://alexandria.tue.nl/extra2/200612171.pdf?pagewanted=all> [Accessed 07.09.2016].

Bouman, M., 2002. Turtles and peacocks: Collaboration in entertainment-education television. *Communication Theory*, 12(2), pp.225–244.

Brechner, M., 2015. *Inclusion, Technology & Pedagogy.* [PPT presentation] Ed. Ceibal

Brundtland Commision, 1987. *Our common future: Report of the World Commission on Environment and Development.* [Online] UN Documents Gatheringa Body of Global Agreements. Available at: <http://www.un-documents.net/our-common-future.pdf> [Accessed 8 August 2016].

Cardey, S., Garforth, C., Govender, E. and Dyll-Myklebust, L., 2013. Entertainment education theory and practice in HIV/AIDS communication: A South Africa/United Kingdom comparison. *Critical Arts*, 27(3), pp.288–310.

Carlson, M., 1985. *Theories of the theatre: A historical and critical survey from the Greeks to the present*. 1st ed. Grand Rapids, MI, United States: Cornell University Press.

Ceibal, n.d. a. *Mapa de Conectividad*. [Online] Uruguay: Ceibal. Available at: <http://contenidos.ceibal.edu.uy/mapas-conectividad/> [Accessed 27 August 2016a].

Ceibal, n.d. b. *Historia /artículo - plan Ceibal*. [Online] Uruguay: Ceibal. Available at: <http://www.ceibal.edu.uy/art%C3%ADculo/noticias/institucionales/Historia> [Accessed 13 September 2016b].

Centros MEC, 2013. *¿Qué es Centros MEC?* [Online] Uruguay: Ministry of Education and Culture. Available at: <http://centrosmec.org.uy/innovaportal/v/19627/31/mecweb/que-es-centros-mec?breadid=null&3colid=19625> [Accessed 6 September 2016].

Coelle, M., Costa-Zahn, K., Hank, M., Kokoska, K., Martin, D., Möller, P., Sedlag, G. and Zimmermann, P., n.d. *Transmedia manifest: The future of Storytelling*. [Online] Available at: <https://transmedia-manifest.com/> [Accessed 4 August 2016].

Colton, S., Ward, V. and Brutschin, J., 2006. *Story guide: Building bridges using narrative techniques*. Berne: Swiss Agency for Development and Cooperation (SDC).

Cornwall, A., 2008. Unpacking 'participation': Models, meanings and practices. *Community Development Journal*, 43(3), pp.269–283.

Couldry, N., 2008. Mediatization or mediation? Alternative understandings of the emergent space of digital storytelling. *New Media & Society*, 10(3), pp.373–391.

Desai, V. and Potter, R. eds., 2014. *The companion to development studies, Third edition*. 3rd ed. United Kingdom: Routledge.

Dudacek, O., 2015. Transmedia storytelling in education. *Procedia - Social and Behavioral Sciences*, 197, pp.694–696.

FAO, 2014. *Food Loss Assessments: Causes and Solutions Case Studies in Small-scale Agriculture and Fisheries Subsectors.* [PDF] Food and Agriculture Organization of the United Nations (FAO). Available at: <http://www.fao.org/fileadmin/user_upload/save-food/PDF/Kenya_Food_Loss_Studies.pdf> [Accessed 19 April 2016].

FAO, 2015. *Global inItIatIve on food loss and waste reductIon 2 0 1 5*. [Online] Food and Agriculture Organization of the United Nations (FAO). Available at: <http://www.fao.org/3/a-i4068e.pdf> [Accessed 19 April 2016].

FAO, 2016. *Key facts on food loss and waste you should know!* [Website] Food and Agriculture Organization of the United Nations. Available at: <http://www.fao.org/save-food/resources/keyfindings/en/> [Accessed 19 April 2016].

Ferrando, A., 2012. *TiranosTembladTV*. [YouTube] Available at: <https://www.youtube.com/user/TiranosTembladTV> [Accessed 6 September 2016].

Figueroa, M.E., Kincaid, D.L., Rani, M. and Lewis, G., 2002. *Communication for social change : an integrated model for measuring the process and its outcomes*. New York: Rockefeller Foundation & Johns Hopkins University Center for Communication Programs.

Finn, S.M., 2014. Valuing our food: Minimizing waste and optimizing resources. *Zygon®*, 49(4), pp.992–1008.

Fraser, C. and Restrepo-Estrada, S., 1998. *Communicating for development: Human change for survival*. United Kingdom: I B Tauris & Co.

Freire, P., 1990. *Pedagogy of the oppressed*. London: Penguin Books.

Fuenzalida, V., 1996. La apropiación educativa de la telenovela. *Diálogos de la comunicación*, 44, pp.91–105.

Garcé, A., 2012. Crisis de 2002: La otra cara. *El Observador*, [Online] 18 July. p.n.d. Available at: <http://www.elobservador.com.uy/crisis-2002-la-otra-cara-n228388> [Accessed 13 September 2016].

General Assembly UN, 2015. *Transforming our world: the 2030 Agenda for Sustainable Development*. [Online] Available at:

<http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E> [Accessed 8 August 2016].

Goodwin, A., 1986. *Teaching TV drama-documentary*. London: BFI Education.

Goodwin, A., Kerr, P. and Macdonald, I. eds., 1983. *BFI Dossier*. London: British Film Institute.

Google Maps, 2016. *Uruguay 33°19'39.2"S 55°01'26.3"W.* Available at: https://www.google.co.uk/maps/place/Uruguay/ [Accessed 06/09/16].

Grupo Radar, 2001. *Perfil del Internauta Uruguayo 2001*. [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2001.pdf> [Accessed 25 August 2016].

Grupo Radar, 2002. *El perfil del internauta uruguayo. Segunda edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2002.pdf> [Accessed 25 August 2016].

Grupo Radar, 2005. *El perfil del internauta uruguayo. Tercera edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2005.pdf> [Accessed 25 August 2016].

Grupo Radar, 2006. *Perfil del Internauta Uruguayo: Cuarta edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2006.pdf> [Accessed 25 August 2016].

Grupo Radar, 2007. *El perfil del internauta uruguayo: Quinta edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2007.pdf> [Accessed 25 August 2016].

Grupo Radar, 2008. *El perfil del internauta uruguayo: Sexta edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2008.pdf> [Accessed 25 August 2016].

Grupo Radar, 2009. *El perfil del internauta uruguayo: Séptima edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2009.pdf> [Accessed 25 August 2016].

Grupo Radar, 2010. *El perfil del internauta uruguayo: Octava edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2012/10/El-Perfil-del-Internauta-Uruguayo-2010.pdf> [Accessed 25 August 2016].

Grupo Radar, 2012. *El perfil del internauta uruguayo: Novena edición.* [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-

content/uploads/2012/12/El-Perfil-del-Internauta-Uruguayo_2012.pdf> [Accessed 25 August 2016].

Grupo Radar, 2013. *El perfil del internauta uruguayo: Décima edición*. [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2016/08/El-perfil-del-internauta-uruguayo-informe-completo-2013.pdf> [Accessed 25 August 2016].

Grupo Radar, 2014. *Perfil del Internauta Uruguayo: 11va edición. Resumen Ejecutivo*. [PDF] Uruguay: Grupo Radar. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2014/12/El-Perfil-del-Internauta-Uruguayo-Resumen-ejecutivo.pdf> [Accessed 25 August 2016].

Grupo Radar, 2015. *Perfil del Internauta Uruguayo: 12va Edición. Resumen Ejecutivo.* [PDF] Uruguay: Grupo RADAR. Available at: <http://www.gruporadar.com.uy/01/wp-content/uploads/2015/11/El-Perfil-del-Internauta-Uruguayo-Resumen-ejecutivo.pdf> [Accessed 1 April 2016].

Gumucio-Dagron, A., 2002. Communication for social change: The new communicator. *The Communication Initiative Network*, [Website] 9 August. Available at: <http://www.comminit.com/global/node/1890> [Accessed 17 May 2016].

Gumucio-Dagrón, A. and Tufte, T. eds., 2006. *Communication for social change anthology: Historical and contemporary readings*. United States: Communication for Social Change Consortium(CFSC).

Ibirapitá Plan, 2015. *Digial inclusion for retired people plan*. [Online] Uruguay: Ibirapitá Plan. Available at: <http://ibirapita.org.uy/> [Accessed 30 August 2016].

Jenkins, H., 2006. *Convergence culture: Where old and new media collide*. New York, NY: New York University Press.

Jenkins, H., 2010. Transmedia storytelling and entertainment: An annotated syllabus. *Continuum*, 24(6), pp.943–958.

Jenkins, H., 2014. *Transmedia storytelling*. [Online] MIT Technology Review. Available at: <https://www.technologyreview.com/s/401760/transmedia-storytelling/> [Accessed 4 August 2016].

Jeskanen-Sundström, H., 2007. ICT statistics at the new millennium-developing official statistics-measuring the diffusion of ICT and its impact. *International Statistical Review*, 71(1), pp.5–15.

Johns Hopkins Health and Education in South Africa, 2013. *About Intersexions*. [Online] South Africa: InterSEXions TV. Available at: <http://www.intersexions.co.za/about-intersexions.html> [Accessed 19 August 2016].

Köroğlu, O., 2011. Developing Afghanistan media and possibility of citizen journalism. *AJIT-e: Online Academic Journal of Information Technology*, 2(4), pp.1–13.

LaRed21, 2005. El Ejecutivo creó el Gabinete ministerial de la Innovación. *La Red 21*, [Online] 19 April. Available at: <http://www.lr21.com.uy/politica/173453-el-ejecutivo-creo-el-gabinete-ministerial-de-la-innovacion> [Accessed 13 September 2016].

Martínez, A.L., Alonso, S. and Díaz, D., 2010. *Monitoreo y evaluación de impacto social del Plan CEIBAL*. [Online] Uruguay: Ceibal. Available at: <http://www.ceibal.edu.uy/UserFiles/P0001/Image/contenidos/pdfs/inspectores%20media/Impacto%20Social.pdf> [Accessed 27 August 2016].

Mediae, n.d. *Shamba Shape Up*. [Online] Mediae. Available at: <http://www.shambashapeup.com/> [Accessed 14 August 2016].

Mefalopulos, P. and Kamlongera, C., 2004. *Participatory communication strategy design: A guidebook*. Rome, Italy: Food & Agriculture Organization of the United Nations (FAO).

Melkote, S.R. and Steeves, L.H., 2015. *Communication for development in the Third world: Theory and practice for empowerment*. 3rd ed. New Delhi, India: SAGE Publications.

Melvin, M. ed., 2007. *The art of the theatre workshop*. London: Oberon Books.

Ministerio de Turismo, n.d. *Carnaval*. [Online] Uruguay: Ministerio de Turismo. Available at: <http://www.turismo.gub.uy/index.php/uruguay-es/item/53-carnaval> [Accessed 9 September 2016].

Morris, N., 2003. A comparative analysis of the diffusion and participatory models in development communication. *Communication Theory*, 13(2), pp.225–248.

Napoli, P.M., 2010. *Audience evolution: New technologies and the transformation of media audiences*. New York: Columbia University Press.

Oxford University Press, n.d. *Oxford Advanced Learner Dictionaries.* [online] Oxford: Oxford University Press. Available at: http://www.oxfordlearnersdictionaries.com/definition/english/soap-opera?q=soap+opera [Accessed 06/09/16].

Parlamento del Uruguay, 2005. Creación del Ministerio de Desarrollo Social. Ley no. 17,866 [Online]. Montevideo. Available at: https://legislativo.parlamento.gub.uy/temporales/leytemp235995.htm [Accessed 06/09/16]

Parlamento del Uruguay, 2007. Creación de la Agencia Nacional de Investigación e Innovación. Ley no. 18,084 [Online]. Montevideo. Available at: https://legislativo.parlamento.gub.uy/temporales/leytemp9347046.htm [Accessed 11/09/16]

Pafumi, M., 2014. *Communication for rural development: Guidelines for planning and project formulation*. Rome, Italy: Food & Agriculture Organization of the United Nations (FAO).

Parfitt, J., Barthel, M. and Macnaughton, S., 2010. Food waste within food supply chains: Quantification and potential for change to 2050. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 365(1554), pp.3065–3081.

Pretty, J.N., Guijt, I., Thompson, J. and Scoones, I., 1995. *Guía del capacitador para el aprendizaje y acción participativa*. Santa Cruz, Bolivia: International Institute for Environment and Development.

Puntos de Encuentro, n.d. *TV y videos Tematicos*. [Online] Nicargua: Puntos de Encuentro. Available at: <http://www.puntosdeencuentro.org/medios/tv-y-videos-tematicos/> [Accessed 19 August 2016].

Quarry, W. and Ramírez, R., 2009. *Communication for another development: Listening before telling*. London: Zed Books.

Rogers, E.M., 1995. *Diffusion of innovations*. 4th ed. New York, NY [u. a.]: Free Press.

Rosales, R.G., 2013. Citizen participation and the uses of mobile technology in radio broadcasting. *Telematics and Informatics*, 30(3), pp.252–257.

Sabido, M., 2003. The Origins of Entertainment-Education. In: A. Singhal, M.J. Cody, E.M. Rogers and M. Sabido, eds. 2003. *Entertainment-education and social change: History, research, and practice*. United States: Lawrence Erlbaum Associates. pp.61 – 74.

Sachs, J.D., 2012. From millennium development goals to sustainable development goals. *The Lancet*, 379(9832), pp.2206–2211.

Scolari, C.A., 2013. *Narrativas transmedia: Cuando todos los medios cuentan*. Barcelona: Deusto.

Scott, J.W., 2011. Storytelling. *History and Theory*, 50(2), pp.203–209.

Secretaría de Comunicación de Presidencia de la República, 2009. *Kids of a public school using their 'Ceibalitas'.* [photograph] ("President Vázquez gives the last computers of Plan Ceibal" photografic record)
Available at: http://archivo.presidencia.gub.uy/_web/fotos/2009/10/2009101302.htm [Accessed 25/08/16]

Secretaría de Comunicación de Presidencia de la República, 2012. Conexión 100 por ciento. *Políticas*Available at: <https://issuu.com/presidenciauy/docs/politicas7> [Accessed 2016].

Servaes, J., 1999. *Communication for development: One world, multiple cultures*. United States: Hampton Press.

Servaes, J. and Malikhao, P., 2005. Chapter 5: Participatory communication: the new paradigm? In: O. Hemer and T. Tufte, eds. 2005. *Media & Glocal Change Rethinking Communication for Development*. Buenos Aires: CLACSO. pp.91 – 103.

Singhal, A., Cody, M.J., Rogers, E.M. and Sabido, M. eds., 2003. *Entertainment-education and social change: History, research, and practice*. United States: Lawrence Erlbaum Associates.

Singhal, A. and Rogers, E., 2002. A theoretical agenda for entertainment-education. *Communication Theory*, 12(2), pp.117–135.

Singhal, A. and Rogers, E.M., 2003. The Status of Entertainment-Education Worldwide. In: A. Singhal, M.J. Cody, E.M. Rogers and M. Sabido, eds. 2003. *Entertainment-education and social change: History, research, and practice*. United States: Lawrence Erlbaum Associates. pp.3 – 20.

Soul City Institute for Social Justice, 2016. *Soul city television series*. [Online] South Africa: Soul City Institute. Available at: <http://www.soulcity.org.za/projects/soul-city-series> [Accessed 19 August 2016].

The World Bank, 2014. *Internet users (per 100 people)*. [Image online] Available at: <http://data.worldbank.org/indicator/IT.NET.USER.P2?end=2014&start=1990&view=map &year=2014> [Accessed 13 August 2016].

Thyberg, K.L. and Tonjes, D.J., 2015. Drivers of food waste and their implications for sustainable policy development. *Resources, Conservation and Recycling*, 106, pp.110–123.

Tufte, T., 2003. Soap Operas and Sense-Making: Mediations and Audience Ethnography. In: A. Singhal, M.J. Cody, E.M. Rogers and M.C.J. Singhal, eds. 2003. *Entertainment-education and social change: History, research, and practice*. United States: Lawrence Erlbaum Associates. pp.399 – 415.

Tufte, T., 2004. Eduentretenimiento en la comunicación para el VIH/SIDA. Más allá del mercadeo, hacia el empoderamiento. *Investigacion y Desarrollo*, 12(1), pp.24 – 43.

Tufte, T., 2005. Entertainment-education in development communication. Between marketing behaviours and empowering people. In: O. Hemer and T. Tufte, eds. 2005. *Media and glocal change: rethinking communication for development.*. Buenos Aires: CLACSO. pp.159 – 174.

Tufte, T., 2007. Soap operas y construcción de sentido: mediaciones y etnografía de la audiencia. *Nueva época*, 8, pp.89–112.

Tufte, T., 2009. *Telenovelas, culture and social change*. [online] Spain, Universidad Autonoma de Barcelona/UNESCO. Available at http://www.portalcomunicacion.com/catunesco/download/tufte_telenovelas.pdf [Accessed 18/07/16]

Tufte, T. and Mefalopulos, P., 2009. *Participatory communication: A practical guide*. United States: World Bank Publications.

United Nations, 2015. *Sustainable development goals .:. Sustainable development knowledge platform*. [Website] New York: United Nations. Available at: <https://sustainabledevelopment.un.org/?menu=1300#> [Accessed 20 May 2016].

United Nations Department of Economic and Social Affairs, 2016. *The 2016 United Nations E-Government Survey: E-Government in Support of Sustainable Development*. [PDF] New York: United Nations. Available at: <http://workspace.unpan.org/sites/Internet/Documents/UNPAN96407.pdf> [Accessed 27 August 2016].

United Nations Development Program, 2015. *Human Development Report 2015: Work for Human Development*. [Online] New York: United Nations. Available at: <http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf> [Accessed 9 August 2016].

UNDP, 2015. *Human Development Report 2015. Work for Human Development.* New York: United Nations Development Programme (UNDP).

UruguayXXI, 2015. *Why Uruguay?* [Online] Uruguay: UruguayXXI. Available at: http://www.uruguayxxi.gub.uy/informacion/wp-content/uploads/sites/9/2015/09/Why-Uruguay.pdf [Accessed date 06/09/16].

Waisbord, S., 2001. *Family tree of theories, methodologies and strategies in Development Communication*. [PDF] New York: The Rockefeller Foundation. Available at: <http://www.communicationforsocialchange.org/pdf/familytree.pdf> [Accessed 12 March 2016].

Warschauer, M., 2003. Dissecting the 'digital divide': A case study in Egypt. *The Information Society*, 19(4), pp.297–304.

Welcome Uruguay, 2007. *Uruguay travel info - cultural and demographic information*. Online: Intepatagonia. Available at: <http://www.welcomeuruguay.com/datosutiles/algomas_i.html> [Accessed 6 September 2016].

Willis, K., 2011. *Theories and practices of development, Vol. 8.* 2nd ed. United Kingdom: Taylor & Francis.

Witteveen, L., 2009. *The voice of the visual: Visual learning strategies for problem analysis, social dialogue and mediated participation*. Delft: Eburon B V.

World Economic Forum, n.d. *Our mission*. [Online] World Economic Forum. Available at: <https://www.weforum.org/about/world-economic-forum> [Accessed 23 August 2016].

World Economic Forum and Harvard University, 2002. *The Global Information Technology Report 2001–2002: Readiness for the Networked World*. [PDF] New York: Oxford University Press. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/un/report.pdf> [Accessed 4 April 2016].

World Economic Forum and INSEAD, 2004. *The Global Information Technology Report 2003 - 2004: Towards an Equitable Information Society*. [PDF] New York: Oxford University Press. Available at: <https://www.infodev.org/infodev-files/resource/InfodevDocuments_15.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2009. *The Global Information Technology Report 2008-2009: Mobility in a Networked World*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/WEF_GITR_Report_2009.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2011. *The Global Information Technology Report 2010 - 2011: Transformations 2.0*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/WEF_GITR_Report_2011.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2012. *The Global Information Technology Report 2012: Living in a Hyperconnected World*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/Global_IT_Report_2012.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2013. *The Global Information Technology Report 2013: Growth and Jobs in a Hyperconnected World*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/WEF_GITR_Report_2013.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2014. *The Global Information Technology Report 2014: Rewards and Risks of Big Data*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/WEF_GlobalInformationTechnology_Report_2014.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2015. *The Global Information Technology Report 2015: ICTs for Inclusive Growth*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf> [Accessed 12 March 2016].

World Economic Forum and INSEAD, 2016. *The Global Information Technology Report 2016: Innovating in the Digital Economy*. [PDF] Geneva: World Economic Forum. Available at: <http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf> [Accessed 4 April 2016].

Zelenkauskaite, A. and Simões, B., 2013. The Big Data User-Centric Model. *The 2013 International Conference on Internet Computing and Big Data*. Las Vegas: .

9   Appendix

Ethical Clearance

For the original proposal of this dissertation an Ethical Clearance for a Vox Populi action was solicited and approved. However, due to modifications made to the original proposal, this practice was not carried out.

Form 2. MSc PhD Staff Ethical Clearance Submission Form

PLEASE allow a minimum of 3 weeks for this process.
You must not begin your research until you have obtained consent as evidenced by this form returned from the APD student Office signed and dated. Ethical Clearance cannot be granted retrospectively.
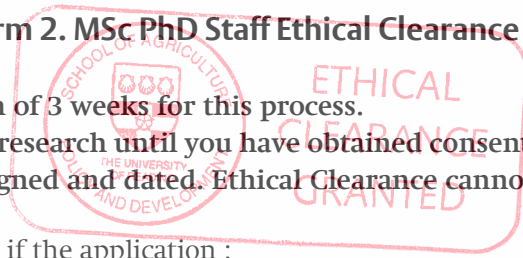
This form can only be used if the application :

- Does not involve participants who are patients or clients of the health or social services
- Does not involve participants whose capacity to give free and informed consent may be impaired within the meaning of the Mental Capacity Act 2005
- Does not involve patients who are 'vulnerable'
- Does not involve any element of risk to the researchers or participants
- Does not involve any participants who have a special relationship to the researchers/investigators

If any of the above apply, please refer to the APD Ethics Chair to decide whether an application can be made through the APD review process or whether the application needs to be referred to the full University Committee.

It is the applicant's responsibility to check for any particular requirements of a funder regarding ethical review. Some funders may require that the application is reviewed by full University Committee and not the devolved School committee.

Full details of the University Research Ethics procedures are available at
http://www.reading.ac.uk/internal/res/ResearchEthics/reas-REethicshomepage.aspx and you are encouraged to access these pages for a fuller understanding. Some helpful advice is available on this link
http://www.reading.ac.uk/internal/res/ResearchEthics/reas-REwhatdoIneedtodo.aspx and the FAQs are particularly relevant.

<u>**ALL QUESTIONS MUST BE COMPLETED.**</u>

APD Ethical Clearance Application Reference Number : M00292

1. **APPLICANT DETAILS:**

   Main applicant name: Andrea Carolina Echavarría Basy
   Name of academic supervisor/project investigator: Sarah Cardey
   Email Address (decision will be emailed here): a.c.EchavarriaBasy@student.reading.ac.uk
   MSc Student ☒
   PhD Student ☐
   Staff Member ☐
   Other (please specify) Click here to enter text.

2. **PROJECT DETAILS:**

   Title of project: Smart-EE practice for dissertation
   Please provide a lay summary of the project, including what is being investigated and why: The objective of the research is to analyse the potentiality of smartphones using Entertainment Education to address development issues.

   This research would be focused in the Sustainable Development Goal N°12: "Ensure sustainable consumption and production patterns" and the objective 12.3: "By 2030, have per capita global food waste at the retail and consumer levels and reduce food losses along production and

supply chains, including post-harvest losses" (United Nations, 2015). The reason why I choose this objective is due to it is related to human behaviour and education.

Procedure. Please outline the project's research protocol (what procedures, research methods and analysis methods are being used) : I would make a practice using only smartphones to record and edit a audiovisual content related to food waste and food consumption habits. The aim of this practice is to try the technology, the limitations of a smartphone and the apps available to edit the content. The final product would be a 1 to 3 minutes video.

The video would be vox-pop(1) related to food consumptions and habits of people in Reading town centre. I would ask people, randomly, in Broad Street about their consumptions habits and their relationship with food waste. Questions are presented in the section "Questionnaire" of the Participation Sheet form.

(1) Vox-pop, from Latin vox populi, is a type of interview which is do it in public places, to people not selected in any way, with the aim to give spontaneous opinions regarding a specific question.

Period over which the data collection is to be undertaken (note: data collection CANNOT commence until ethical approval has been granted as evidenced by this form signed and returned).
    Proposed Start Date: 06/08/2016
    Proposed End Date: 07/08/2016

3. **THE RESEARCH:**

a) **Nature and number of participants** who are expected to take part in your survey/focus group. Please estimate if uncertain. As ethical clearance involving minors is more complex because of safeguarding and consent issues, please consider carefully whether you need to involve minors under the age of 16 in your research.

Participants	Number participating
Minors under 16 years of age	0
Students	0
Other members of the University	0
Members of the general public	15
Businesses	0
Government officials	0
Other *If other please specify:*	0

b) **Funding.** Is the research supported by funding from a research council or other external sources for example a charity or business?

Yes   ☐   If yes, please specify funder :   Click here to enter text.
No   ☒

 If yes, it is the responsibility of the applicant to check for any particular requirements of the funder regarding ethical review. Some funders may require that the application is reviewed by full University Committee and not the devolved School committee.

c) **Recruitment.** Please describe recruitment procedures. How have participants been selected? Are there any inclusion/exclusion criteria? Participants must be told on the Participant Information Sheet how and why they have been selected. You should attach ay recruitment materials to this application.

Participants would be selected randomly, during the day of video recording in Broad Street (6 and 7 of August 2016). Even though I cannot decide in advance who will participate in this Vox-Pop I could define that they would be over 18 years old (in order to use their images), women and men.

d) **Exceptions.** Does the research involve minors, medical patients, individuals with learning difficulties, vulnerable adults, participants recruited through social service departments, or anyone in a special relationship with yourself/data collectors? E.g. Supervisor; lecturer to a group of students; or person in a position of responsibility for participants.

       Yes   ☐
       No   ☒

If yes, this may result in referral to the University Research Ethics Committee (please note their deadlines). Please provide extra detail here: Click here to enter text.

e) **Where is the data collection to be undertaken?** Specify country(ies) and specific location(s) Broad Street, Reading Town Centre, Reading.

f) **What forms of data collection does the research involve?**

Group discussion/ workshop   ☐
Personal interviews   ☐
Telephone interviews   ☐
Questionnaire/paper survey   ☐
Postal survey   ☐
Email/ online survey   ☐
Which software tool will be used, if any?   Click here to enter text.
Other *(specify)*:   Vox-Pop

g) **Who will undertake the collection and/or analysis of data?**

Myself   ☒
Other MSc students   ☐
Other Higher degree students   ☐
Other contract research and/or academic staff   ☐
Individuals outside University   ☐
External organisations   ☐

If individuals outside the University and/or external organisations are involved in the collection or analysis of data, give brief details below. Indicate how the ethical procedures and standards of the University will be satisfied: To ensure the safety of the researcher, she will at no point be alone while collecting the videos. She will be accompanied by another student, a friend, or her supervisor at all times. The person will not be collecting data, but will be there during the data collection process.

h) **Does the research require participants to consume any food products?**

No   ☒
Yes   ☐

If yes, please provide full details and indicate measures in place to ensure excellent food hygiene standards and ensure participant safety. Click here to enter text.

i) **Do you consider there are any potential ethical issues in this project? Does the research require collection of information that might be considered sensitive in terms of confidentiality, potential to cause personal upset, etc.?**

No ☒
Yes ☐

If yes, please provide full details and indicate how these issues will be addressed, how researchers will manage participant reaction. Support and de-brief sheets should be attached if relevant. Click here to enter text.

j) **Will the research involve any element of intentional deception at any stage?** (i.e. providing false or misleading information about the study, or omitting information)?

No ☒
Yes ☐

If yes, this must be justified here. You should also consider including debriefing materials for participants which outline the nature and justification of the deception used. Click here to enter text.

k) **Are participants offered a guarantee of anonymity and/or that the information they supply will remain confidential?**

Yes ☐
No ☒

If yes, give brief details of the procedures to be used to ensure this and particularly if the data has 'linked' or 'keyed' anonymity (eg. where published results are anonymous but participant details are recorded and held separately to the responses but keyed with reference number) : Click here to enter text.

l) **Will participants be required to complete a separate consent form?** Many APD applications do not require participants to complete a separate consent form. Please see the templates provided.

☐ Yes. Names, addresses and copies of completed forms will be given to APD student office
☒ No. The data collection is anonymous and a combined information/consent sheet supplied
☐ Neither of the above, or the research involves participants under the age of 16

If 'neither of the above' selected, or the research involves participants under the age of 16, please outline the specific circumstances. The participants will not provide their names or another personal information. They will be given an information sheet. The objective of the Vox-Pop is to ask the same four questions to every interviewed person. However, their faces would be shown in the final video which only would be used for this dissertation. They will be made aware of this before they do the interview, so their participation in the video constitutes consent. The video will only be used for the purposes of the dissertation.

m) **Will participants be offered any form of incentive for undertaking the research?**

No ☒
Yes ☐

If yes, give brief details, including what will happen to the incentive should the participant later withdraw their input or decide not to proceed : Click here to enter text.

4. **DATA PROTECTION**

   Data Storage, data protection and confidentiality. Please make sure you are familiar with the University of Reading's guidelines for data protection and information security.
   http://www.reading.ac.uk/internal/imps/

Please outline plans for the handling of data to ensure data protection and confidentiality.
Covering the following issues: Will any personal information be stored? How and where will the data be stored? Who will have access to the data? When will it be deleted?

Not personal information would be gathered, only participants images. All recordings will be stored on the researcher's computer, and the files, apart from the finished video, will be deleted upon completion of the dissertation.

<mark>**Applicants**</mark>**: Please now scroll to Section 7** to input your :
- Information Sheet(s) for Participants (mandatory)
- Data Collection Tools, for example: recruitment materials, interview/focus group protocols (how you are conducting the process), interview/focus group questions, questionnaires, online survey questions, debriefing and fact sheets
- Consent Forms (optional, may not be necessary if consent assumed in Information Sheet)

If the text boxes do not allow input in the desired format, please append documents separately to the email when sending this form.

Please then email your completed form (and any separate supporting documents) to your supervisor/project investigator. Project investigators or independent academics may return form directly to sapdethics@reading.ac.uk

A decision on whether ethical clearance has been granted will be emailed to you via the APD Student Office along with your authorised form.

You may NOT proceed with your data collection until ethical approval has been granted as evidenced by return of this approved form.

Note: The process of obtaining ethical approval does not include an assessment of the scientific merit of the questionnaire. That is the separate responsibility of your supervisor/project investigator in discussion with yourself.

5. Supervisor/project investigator review. Section to be completed by supervisor/PI where relevant.

Participant information sheet(s), data collection tools and any other supporting information may be pasted in section 7 below. Alternatively they may be attached to this email. Please review these documents and then complete the checklist below.

Checklist. Does this application and supporting documents adequately address the following ?

☒   The safety of the researcher(s) and those collecting data, the safety of the participant(s)

☒   Is the language /grammar/content appropriate (i.e. University standards and reputation upheld)

☒   There are no questions that might reasonably be considered impertinent or likely to cause distress to the participants

☒   The researcher has provided the participant information sheet (mandatory)

☒   The researcher has provided the questionnaire or survey/ workshop, focus group or interview questions (mandatory)

☒   The Participant Information Sheet gives sufficient information for the participants to give their INFORMED consent

☐   A separate consent form has been included (optional)

☒   Data will be handled, stored and deleted appropriately according to University guidelines, and the participants have been adequately informed about this in the Participant Information Sheet

☒   The Participant Information Sheet contains all relevant sections

☒   **I am satisfied that this application meets the minimum standards for APD Ethical Clearance to be granted**

==**Supervisor/Project Investigator, please forward this form as a WORD document and any separate supporting documents to sapdethics@reading.ac.uk.**== The form will be logged by the student office and allocated to an APD ethics committee reviewer. The APD ethics reviewer will review the application and complete section 6.

6. APD ethics committee review. Section to be completed by APD Ethics Committee member.

Decision

Clearance refused	☐ Resubmission required
Clearance granted as presented	☒
Clearance granted subject to revisions suggested	☐ No need to resubmit once amended
Referred to APD Research Ethics Chair	☐ May require further information

Ethics Committee Member please enter comments, reasons for rejection, summary of revisions required before proceeding (if applicable):

Click here to enter text.

Committee Member Name: Ariane Kehlbacher   **Date Reviewed :** 25/07/2016

APD Ethics Committee member electronic signature (For signature, save document as pdf, then open pdf and use 'sign' option. Alternatively check here if no electronic signature used ☐)

A.K.

7. Supporting Documents.

Please cut and paste the following documents into the text boxes below.

- Participant Information Sheet(s),
- Protocols (the procedures, how you will conduct and administer the data collection, interviews, surveys)
- Data Collection Instruments (interview questions and survey questions)
- Consent Forms (if Participant Information Sheet does not assume consent)
- Recruitment Materials (if relevant)

It is preferable that all information connected to this application is contained in one document. However, if you find that the text boxes below are not adequate, you may attach and email these supporting documents separately.

Supporting Documents for this application are pasted below. The text boxes cannot accept some types of formatting when pasting in documents. If this is the case, append them separately to the email with this form.

Reference number:

Participant Information Sheet
Project name: Entertainment Education practice for the dissertation "Smart-EE: Could Entertainment Education address development issues at low cost, with contents produced only with smartphones?"

I am an MSc student at the University of Reading. This research project aims to find out whether or not it is possible to produce audio-visual entertainment education contents only using smartphones. I am interested in exploring the creation of a low-cost methodology to address development issues through Entertainment Educational contents.
To undertake this research, I am recording a video vox-pop in Broad Street in Reading Town Centre. This will allow me to see whether the quality of the recording is of sufficient quality, and basic software are easy enough to use, for them to be realistic tools in Entertainment Education in developing countries.
I am interested in having your authorisation to record and use your image within this vox-pop. You are encouraged to freely express your opinions and please be assured that your views are valued and that there are no right or wrong answers to the questions asked.

We will not collect any names or personal details as part of the interview. However, your face and comments would be shown in the video. The video will only be used as part of the dissertation, and will not be broadcast in any way. All video footage will be destroyed at the end of the dissertation (September 2016), with only the final edited video remaining.

Your participation is entirely voluntary and you are free to withdraw from the video and interview at any time you feel uncomfortable or unwilling to participate, and you do not have to specify a reason. Any in-part or total contribution can be withdrawn up until the point at which the video is edited before 17/08/16. After 18/08/16 it will not be possible to withdraw your contribution from the results of the research. If you wish to withdraw, please contact me (details below), quoting the reference at the top of this page.

The vox-pop will be video recorded. If you agree your answers would be part of the final video. All data I collect will be stored securely electronically on a password-protected computer.

By participating in this video you are acknowledging that you understand the terms and conditions of participation in this study and that you consent to these terms.

This research project has been reviewed according to the procedures specified by the University Research Ethics Committee, and has been given a favourable ethical opinion for conduct.
Thank you very much for taking time to take part in this research!

Student Contact Details
Carolina Echavarría
School of Agriculture, Policy and Development
Agriculture Building
Earley Gate, Whiteknights Road
PO Box 237
Reading RG6 6AR
United Kingdom

E-Mail: a.c.EchavarriaBasy@student.reading.ac.uk
Supervisor Contact Details

Dr. Sarah Cardey
Lecturer in International Development
Director, Graduate Institute for International Development and Applied Economics

Programme director MSc Applied International Development
Programme director MSc Communication for Development

Research Associate, Walker Institute for Climate Systems Research

School of Agriculture, Policy and Development
University of Reading, Earley Gate
Reading, RG6 6AR
Telephone: + 44 (0) 118 378 6594
Fax: + 44 (0) 118 926 1244
http://www.reading.ac.uk/apd/staff/s-p-cardey.aspx

<div align="center">Vox Pop Questions</div>

1. Could you tell me how often do you buy food?
2. What kind of food do you buy? It is fresh? It is frozen?
3. How do you know that the food that you bought days ago is expired?
4. What do you do with this expired food?

Click here to paste your supporting documents into a text box

Click here to paste your supporting documents into a text box

Click here to paste your supporting documents into a text box

Click here to paste your supporting documents into a text box