GRAPHIC INTERACTIVE ENVIRONMENTS AS TOOLS OF CONSERVATION, IDENTITY AND TRANSMISSION OF ANCESTRAL KNOWLEDGE FOR CHILDREN IN TUNGURAHUA

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Abstract

Tomabela town is a group of native culture located in the south-east of Ambato. They are around of 14 thousand people. Western processes of globalization have influenced their customs, language, habits and traditions, which has condemned them to an early disappearance as an ethnic culture.

The objective of this project is to rescue the identity of the Tomabela people and act as a means of dissemination for future generations, using the potential of the videogame as a cultural and a powerful educational tool. It also allows generating a modern, digital and interactive response to the problem related to the conservation and transmission of ancestral knowledge.

A qualitative approach was applied to determine the study dimensions, based on ancestral knowledge, educational methods and new technologies. During the investigation, the invasive influence of Western culture on ancestral peoples was addressed, and the possibility of education through digital media as an alternative response in a total sample of 341 individuals belonging to this age group.

As a result of the research, it was possible to demonstrate that the influence of video games has an important reach in the integral development of the individuals studied. 87% showed interest in the video game, in addition to identifying the customs, habits and traditions of their culture, while 13% identified their own clothing and language, allowing the interaction to develop through effective communication that will allow it to be maintained through time.

Keywords: Ancestral knowledge, Graphic environments, Identity, Interactive environments, Tomabela.

1 INTRODUCTION

Throughout history, humanity has used graphic resources to communicate ideas. From the caves of Palmira to the modernity of multimedia, it is image and sound that predominate when communicating a message or transmitting information for certain sectors as a communicational process. The oral environment, on the other hand, is preferred in the many ancestral cultures of Ecuador, as a way to inherit knowledge between generations and ensure its durability over time.

These cultures also use various techniques involving textiles, ceramics, wood carving, among others. All these forms of expression are accompanied by symbols, signs and sounds of each nationality; Attachments with a characteristic narrative form. This form of transmission has been preserved for centuries, surviving and transforming. However, as societies advance, these methods become futile and urban conglomerates tend to dismiss and forget this knowledge as a result of the globalizing effect of mass information.

[1] According to Abbas (2012), regarding the use and importance of multimedia in education: "Unlike the traditional teaching methodology that is based on the master class, the active methodology includes different tools to achieve interaction with the student and, in this way, their involvement in their own learning "(p.56). The new forms of social expression can be avant-garde tools for the conservation and transmission of ancestral knowledge in order to learn from the new generations. Interactive graphic environments play a fundamental role in this process. The production of a generalized and easily accessible visual language is vital for the appropriate transmission of information. The preservation of the cultural identity of the people is a social responsibility of which the designer participates as a professional actor.

In the process of a nascent and changing science, technological advances go hand in hand with new ways of teaching, and learning. A video tutorial, a guide written on a blog and direct assistance through social networks, generate a more personalized teaching environment in order to simplify processes and bring the target audience closer to knowledge that would otherwise be complex or cumbersome to acquire by traditional means.
The communication environments generated through technology generate new forms of expression and transmission of messages and information by alternative means to the language as such. For this purpose, techniques and other forms of communication are used as graphics and symbols. (Dandis, 2007). So, there is an interrelation between the message that is to be transmitted and the interpretation given by the user, which should be under the control of the communicator, the author points out: "The meaning is in the eye of the observer as well as in the talent of the creator ", referring to the skill and talent of the visual communicator regarding the spectator and his interpretative ability; creating a united symbiosis through the message. This supposes a compromise between the communicator and the receiver of said information. If technology is involved in the process, we see how the communication gap between actors diffuses into memorable sensations. (Yates, Price, 2005, p.36)

Starting from the previous premise, a human brain can perceive a separate animation in one part of the brain, while the text is processed in another independent region. Then, it is known that the independent information that each channel can receive is really limited (Sweller, 2006). However, when the spectator activates both regions at the same time, the information is introduced organically in both ways, guaranteeing its permanence in the memory for a relatively short time. The brain creates relationships between the image and the text, creating new links in it and a greater permanence in the conscious and memory.

This very important aspect of the fusion of two disciplines, makes motion Graphic a more than attractive option to transmit information in small bites without exhausting the public with long exposures of information. It is a strong and powerful contrast against the traditional education system and thanks to new technologies, it is a relatively cheap resource to produce.

The ability to synthesize is necessary to compress information to the degree of making it small and digestible for mass audiences. In this aspect, the designer's work is complemented with his ability to create visual narrative without falling into redundancy. The use of a structured script helps in this process, previously going through a complementary investigation of the topic to be treated and the visual tool to be used. Thus, it can be said that a Motion Graphic also responds to the needs of an accelerated society, where time becomes a currency and every second counts. Exposure to a visual product parked in a traffic light is very small. Therefore, it must be concise, direct and very striking in terms of visual design.

One of the branches that involves knowledge in the multimedia branch and elevates them to the power of involvement, are interactive graphic environments. As Orozco affirms: "The main purpose is that the use of information technologies serves to move from the information society to the knowledge society, because in the digital world the medium is not the message." (2015, p. 284).

The theorists of knowledge ecosystems and the knowledge society, aim to use modern means to transmit a diverse variety of knowledge ranging from scientific rigor to ancestral knowledge. Then, it is stated that, in order to build a society of mutual knowledge, it is necessary to update this knowledge and elevate it to the degree of interaction beyond the basic narrative itself.

This is where the development of multi-media products with distinctive characteristics and according to modern needs, which are eye-catching, interactive and allow for the transmission of a lot of information in a continuous practice process, which results in a fast, effective, and effective information retention didactic

In this process of searching for media that meet these needs, one of the most representative social interactive products of the late twentieth century and early twenty-first century, are video games.

Videogames are basically virtual multimedia interactive environments, since they involve all the branches of the media to transmit ludic and representative sensations for a diverse audience. They consist of non-ephemeral artistic content (stored words, sounds and images), which place games much closer to the ideal object of the Humanities, the work of art ... They become visible and textualizable for the aesthetic observer (Gallagher, R., & Paldy, A., 2006, p. 46)

It is appropriate that both communication and culture developed at the same time, in the midst of a constant search to create, transmit and preserve. Both works simultaneously to generate paths and ways to understand the other and the environment.
In the same way, culture aims to have a function similar to communication: Transmit information. The content to which the culture clings to create identity and differentiation between conglomerates, is considered "knowledge".

All this "knowledge" ends up compressing into phonetic sounds and symbols drawn on the stone, visual representations in time that with the subsequent social and technological transformations, become paper graphics, and then digital images for the present.

By basic definition, Knowledge Ecology challenges Western structured thinking by establishing as intangible and intangible entities that in the orthodox process are not admitted until recently, when many organizations such as UNESCO, admitted the concept of "intangible heritage".

[6] Under the expression "ecology", argues that it is named for the following concept: "It is an ecology because it is based on the recognition of the plurality of heterogeneous knowledge (one of them is modern science) and on the continuous interconnections and dynamics between them without compromising their autonomy. The ecology of knowledge is based on the idea that knowledge is Inte
knowledge "(Bauman, 1999, p. 67).

The "ecology" of knowledge seeks to associate all kinds of knowledge (including Western knowledge) in an attempt to build a dialogue between social systems to share and preserve intangible assets, and turn them into a source of utility for an increasingly globalized society.

However, that does not mean that they are merged in the process. By concept, the dialogue between knowledge implies that the knowledge of each people will maintain an "autonomy", the same that is guaranteed through reforms and laws created through law codes and specialized agencies for this purpose. One of them (in the case of Ecuador), is the Ecuadorian Institute of Intellectual Property (IEPI), and the Traditional Knowledge Unit, which is in charge of preserving, transmitting and protecting both the authorship and the integrity of said traditional knowledge.

2 METHODOLOGY

A qualitative methodological approach was applied in a sample of 341 individuals through observation. The information was collected through different professional points of view with respect to the central axes that will affect the result of the research (education, ancestral knowledge, interactive graphic environments); these criteria allowed to fulfill the proposed objectives.

Figure 1. Kind of house o Tomabela.

A series of texts, essays and articles of a humanistic, sociological, educational and technical nature were reviewed and analyzed to support and deepen the scope of the established variables, and the documentary base that will help to understand the current situation of the community and its needs. This information was organized sequentially within the information exploration generated through the theoretical framework.

This categories were determinate in this research, to obtain real information about the phenomenon researched.

a) Motion graphics
b) Multimedia
c) Audiovisual Graphic Design

d) Communication technologies

e) Culture

f) Knowledge Ecology

g) Plurality of Knowledge

h) Interculturality

A field research was developed through tools such as scientific observation, the interview and the focus group. With these data, we can generate visual responses directed towards the achievement of the objectives of the present.

Table 1. Participant and instruments.

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<tr>
<th>Participant</th>
<th>Instrument</th>
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<tr>
<td>1 Professional kindergarten</td>
<td>Interview</td>
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<td>2 Graphic designers</td>
<td>Interview</td>
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<tr>
<td>1 Communicator / publicist / expert in technology and new media</td>
<td>Interview</td>
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<tr>
<td>1 Anthropologist - Historian</td>
<td>Interview</td>
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<tr>
<td>1 Community leader</td>
<td>Interview</td>
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<td>341 Individuals</td>
<td>Observation</td>
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3 RESULTS

Based on the premise formulated in the hypothesis, and thanks to bibliographic, quantitative and documentary research, it can be affirmed that the project complies by demonstrating that Interactive Graphical Environments can be used both for the conservation, identity and transmission of ancestral knowledge for children in Tungurahua.

For the support of the same, bibliographic and quantitative research was carried out regarding the educational aspect of the project, the same one that gave the following results, this was applied to the sample of 341 individuals:
a) It can be educated through multimedia tools.

b) Learning from these media, is more effective, faster and helps generate memorability in the short and long term.

c) The "virtual" experience generated by the project, allows to create a correlation between the user's experience within the platform as in his daily life. In this way, two approaches are created that can be directed by a qualified teacher to guide the user both within the application, and in what is learned with a view to real life.

<table>
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<th>Table 2. Research indicators.</th>
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<td>Variables</td>
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<td>Interactive Graphics</td>
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![Figure 3. Test unity, Tomabela Town, design for own people.](image)
3.1 Motion Graphics: Animation, Design and Visual Style

In this regard, he informs us that using dramatic film shots with emphasis on the main characters, helps to reinforce the message and memorability in the audience as well as rescue the details that will be generated in scenarios and in the clothing of the protagonists.
Then, you can understand that it is looking to generate fantastic characters with a realistic and credible base. Therefore, the development course of the graphic section will necessarily require a visual library of these aspects that represent different cultural nuances of the community.

4 CONCLUSIONS

The Tomabelas kids are a community built on routine traditions and customs. Their day begins with the family breakfast, followed by feeding the animals of the home. The observation showed an interest in the audiovisual and motion in graphics in the sample investigated, on the other tools.

Next, the inhabitant Tomabela concentrates his day in his activities of attainment of more important resources, derived mainly in the familiar agriculture, doing emphasis in the commerce of the products obtained with other communities or with the West.

The agricultural custom Tomabela dictates that, the most attractive and better-quality products will be subject to sale or exchange, while the surpluses are intended for personal consumption.

One of the aspects that define the progress achieved with multimedia is the interaction and ease of transmission of information to the user. Many of these resources are intended for entertainment, but their applications can also be used for education from an early age. They depend on electronic means to be effective and achievable, and technology allows large amounts of information to be grouped in a very short time and efficiently.

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