

RESEARCH TITLE

The Effect of Digital Technologies in Broadcast Graphics and Research on Interactive Books and Magazines

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HNSJ, 2023, 4(2); <https://doi.org/10.53796/hnsj4245>

Published at 01/02/2023

Accepted at 21/01/2023

Abstract

This research discusses one of the important topics, which is entitled “the Effect of Digital Technologies in Broadcast Graphics and Research on Interactive Books and Magazines”. The research aims mainly to talk about the definitions of digital technologies, knowing about broadcast Graphics and Research, clarify the benefits and pitfalls of using technological broadcast graphics and research on interactive books and magazines and other things.

The findings of this paper are that artificial intelligence refers to the process by which human intellect's capabilities are mimicked. It was found out that digital technologies affect in broadcast graphics and research on interactive books and magazines by its depending on the relevant content.

Key Words: digital, broadcast graphics, research, interactive books, interactive magazines.

INTRODUCTION

Broadcast media is a technical term that refers to all technical means that are used to distribute and transmit information to the largest possible number of people through magazines, television, radio, marketing through Bluetooth and others.

Digital technology has been taken advantage of by employing it in broadcast graphics in order to enhance and develop interactive books and magazines to become more interesting for the reader, so that the reader feels that he is inside the storytelling events realistically through video, audio, text and any other interactive elements.

Problem Statement

The main problem of digital technological broadcasting techniques lies in the weak personality of broadcasting and the diversity of audience selection, as many of the podcast technologies that are spent on interactive books and magazines may be wrongly selected and do not suit the target audience, as the reason for this is due to a weak experience podcast creators.

Limitations of the thesis

The limitations of this thesis are:

- Time limits: 2022-2023
- Place limits: Turkey/ Istanbul Aydin University
- Objective limits: The Effect of Digital Technologies in Broadcast Graphics and Research on Interactive Books and Magazines

Research Objectives

The thesis mainly aims to:

- Define the concept of digital technologies
- Define the concept of broadcast graphics.
- Define visual research.
- Understand the concept of interactive books and magazines.
- Reveal the types of digital technologies used in broadcast graphics and research

Methodology

In each project, at least one methodology should be used to search for useful information about a particular topic. In my project, I intend to use one method to get the pieces of information which I have and this method is the qualitative method / Secondary research which its main objective is to look for and explore the different information through getting them from different resources such as: websites, articles, journals and other things. This type of collecting data is very important because it helps in obtaining answers and solutions of many problems and questions compared to other method, and it helps in improving the quality of different outputs.

Literature Review/ Previous studies

What is Digital Technologies?

Obukhova &Ekaterina &Ershova mentions that digital technologies have achieved great growth now, as this growth included a number of areas such as education, health, film industry, and most importantly, the growth in broadcast graphics and research on interactive books and magazines. (Anna Obukhova&Ekaterina Merzlyakova&Irina Ershova, 2022)

What is Broadcast Graphics and Research?

Graphic design is an integral part of the motion picture and television scene and has evolved over the years from two-dimensional still images and characters to dynamic three-dimensional animation that dominates broadcasts and filmmaking, and the manufacture of interactive books and magazines to be sophisticated books. These books facilitate interaction with the book and reading in an unconventional way, it encourages different groups to read.

What is Interactive Books?

An e-book is an electronic publication containing a set of texts and images, produced, published and read on a computer or other smart device, and it may have a similar printed book, and it may be designed from the beginning in an electronic way. Laptop computers. (Henry B. Weaver, Jr.&Thomas M. Cooley, II, 1953)

What is Interactive Magazines?

The interactive magazine is entering the texts of the articles into the computer, processing them and adding broadcast graphics ad media, and they are published electronically, so that the article appears to the readers electronically. (CHEATANA, 2014)

What is the types of digital technologies used in broadcast graphics and research?

❖ Artificial Intelligence (AI):

Artificial intelligence (AI) refers to a machine or computer's capacity to mimic the functions of the human mind. Utilizing a variety of technologies, artificial intelligence enables machines to plan, act, comprehend, learn, and sense with intelligence akin to that of a person.

❖ Voice-Controlled Devices:

One of the advantages of digital control that depends on graphics in the manufacture of interactive books and magazines is the use of voice control devices, which are systems that are used to insert sound into electronic books and interactive magazines on the Internet in a way that facilitates interaction between the reader and the magazine/the book.

❖ The NextGen TV – ATSC 3.0 Technology:

It is one of the third generation technologies that rely on broadcasting videos and displaying them on devices other than TV, such as tablets and smartphones. The use of NextGen TV - ATSC 3.0 technology innovation in the media is one of the best opportunities to achieve the impossible in the field of preparing interactive books and magazines in a way that attracts the reader and increases profit.

❖ Augmented Reality Graphics (AR-GFX):

With computer-generated inputs, designers can enhance certain aspects of the real environment for consumers in an experience known as augmented reality (AR). Designers produce inputs for digital material that react in real time to changes in the user's environment, often movement. These inputs can be anything from audio to video to graphics to GPS overlays. (Azuma, 2001)

What is the benefits and pitfalls of using technological broadcast graphics and research on interactive books and magazines?

Takacs&Swart&Bus reveals that there are many benefits for using technological broadcast graphics and research on interactive books and magazines: (Takacs&Swart&Bus, 2015)

- ❖ Technological broadcast graphics offers good advantages to the augmented virtual environment, as the use of augmented reality inside interactive books and magazines leads to transferring the virtual world inside these books to a real world.
- ❖ The importance of using technological broadcast graphics and research on interactive books and magazines is that they contain visual aids that enable people of all ages to interact with the text in front of them, whether it is a book/magazine/news or other.

On the other hand, Takacs&Swart&Bus reveals that there are many pitfalls for using technological broadcast graphics and research on interactive books and magazines: (Takacs&Swart&Bus, 2015)

- ❖ One of the most important Pitfalls of technological broadcast graphics and research on interactive books and magazines is that it may distract the reader in more than one place.
- ❖ One of the most important negatives of technological broadcast graphics and research on interactive books and magazines is that it may disrupt the work of book and magazine sites because of the intense pressure on them due to the high number of readers.

What is the effect of digital technologies in broadcast graphics and research on interactive books and magazines?

(Muriuki, 2022) reveals that numerous ways in which digital technology have altered and impacted the magazine and book industries. New technologies have an impact on content, style, quality, and pricing, from facilitating faster and easier access to content to pressuring publishers to innovate outside the box. (Muriuki, 2022)

In addition, digital technologies affect in broadcast graphics and research on interactive books and magazines by its depending on the relevant content. The Internet has made it easier for publishers to locate fascinating, engaging, and reader-friendly content, even while it has pushed print publications to change their aesthetics in order to keep readers interested and make them interactive. Readers desire in-depth, insightful, and pertinent material since they will likely connect to the Internet to learn about breaking news and advancements in a certain business or area. Due to the tremendous demand for quality and the growing number of freelance authors, photographers, and designers, publishers are now able to provide readers with exceptionally high-quality products. (Ariani Wardhani&Setiawan Sabana& Ira Adriati, 2015)

Using digital technologies that based on broadcast graphics and research effect on interactive books and magazines by providing an Interactive Reading Experience to Users. An interactive reading experience is provided by the digital publishing platform. Users can modify the font size and enlarge/reduce it as needed in the e-book in addition to turning the pages. To make your post more appealing to your audience, you can include a variety of interactive aspects. In your e-book, you can incorporate pictures and videos. Users can look up terms in the dictionary. They can use the search option to look up a word or phrase.

What is relationship of using augmented reality graphics in interactive books and magazines?

In order to use augmented reality technology in magazines and interactive books, publishers need a computer with a projector, display, or HMD, as well as an image capture device (webcam or video camera). The basic tool needed to use augmented reality technology in these publications is navigation devices such as GPS and HMD with a processor and forming what can be understood as a helmet through which images are displayed, captured and processed. (A. Tahira&J.B. Ribeir&Kitamura, 2013)

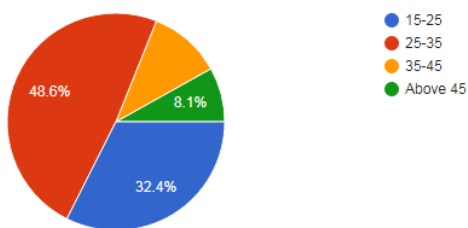
Augmented reality technology has been able to change the form of traditional children's books to more interactive books, helping children to be able to understand and perceive information and drawings and deal with them easily.

Coles reveals that there are a number of disadvantages resulting from the use of augmented reality graphics in publishing interactive books and magazines, and the most important of these disadvantages are the following: (A. Tahira&J.B. Ribeir&Kitamura, 2013)

- Creating many interactive publications, books, magazines and newspapers using augmented reality technologies is very expensive.
- The use of augmented reality graphics in abundance within the interactive content may distract the reader, which leads to drawing his attention to these images, graphics and advertisements instead of focusing on the original content (the interactive book or magazine).
- Some people may find AR magazines and books to be overwhelming and intrusive and prefer to be read through traditional reading formats.

Materials and methods of work

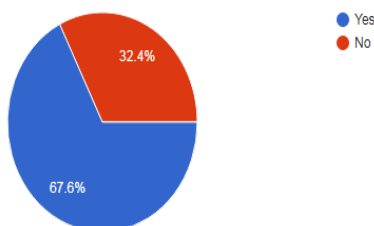
Q2. How old are you?



٣٧

The results of this question indicated that 32.4% of the participants are between the ages of 15-25 years, while 48.6% of them are between the ages of 25-35, 10.8% are between the ages of 35-45, and 8.1% are over the age of 45.

Q4. Have you ever watched Broadcast Graphics and Research on any Interactive Books and Magazine



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The results of this question indicated that 67.6% of participants found out that they watched Broadcast Graphics and Research on any Interactive Books and Magazine while 32.4% of them are not watched.

Discussions and Findings

Discussions

Numerous discussions have demonstrated how the development of technology had a significant impact on the production of these books and magazines and made them more interactive. Previously, conventional books and magazines employed a particular kind of ink that contained nanoparticles of graphite or silver. It directly allows us to add sounds or illuminations to the digital book, enhancing the reader's sensory experience. (Ariani

Wardhani&Sabana&Ira Adriati, 2015)

The use of augmented reality technology in printed books to make them interactive books is one of the very common technological applications that enrich the reader's feelings.. (Lekakos, 2007). There are more discussions centered on the Finger Link technology, a table with a touch screen that responds to movements, which is utilized in interactive books. It enables entry into digital interaction with specific text fragments and images of a printed book or reading the interactive magazine in a professional manner thanks to the improved shape of augmented reality and particularly created gestures.

Numerous debates have shown that alongside programs for learning sight words, programs for accelerating reading, programs for measuring reading time, programs for calculating words per minute, and programs for translating speeds have all been developed. Reading more widely generally improves understanding. Links and other supporting materials can be "layered" into texts to make up for reader background information. This is not a diversion because, when done well, it may contextualize the text. (Heick, 2022)

Findings

- ❖ I found out that one of the most frequently used technical words for the usage of numerous media, such as graphics, interactive applications, photos, video, and text, is "multimedia."
- ❖ I found out that a collection of electronic hardware, software, resources, and tools that generate, store, and subsequently process data is referred to as digital technologies.
- ❖ I found out that using Google's Nimble, Finger Link technology and others are examples on the new technology used in making a book/magazine to be interactive that enhances reader emotions, have still another effect of the use of technology.

CONCLUSION

In conclusion, I reached to the fact that digital technologies is a set of electronic devices, systems, tools and resources that create, store, and then process data. It was reached that graphic design is an integral part of the motion picture and television scene and has evolved over the years from two-dimensional still images and characters to dynamic three-dimensional animation.

I reached out that the effect of digital technologies in broadcast graphics and research on interactive books and magazines represent in increase the content that print book/magazine as well as it assists the writer in identifying the pages that are most attractive and readable to readers.

I suggest that a large number of publishing houses take the support and approval of converting traditional books and magazines into interactive magazines to attract larger numbers of readers. I also suggest that a greater number of studies be conducted on this subject.

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