

## THE PLACE OF PIXEL ART IN GRAPHIC DESIGN WORKS

### PİKSEL SANATININ GRAFİK TASARIM ESERLERİNDEKİ YERİ

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#### ABSTRACT

Pixel art is one of the digital arts. Pixel art, which consists of adjacent pixels, consists of light and colors. The first game examples with low resolution can be given as an example of pixel art. Pixel art, which has developed itself with the change of technology over time, continues to show itself in many examples in the field of digital art, as well as cross-stitch, mosaic, beadwork in traditional art.

In the study, how pixel art emerged, usage areas and examples of pixel art are given. With the inclusion of pixel art in designs, its importance in the field of design has been mentioned. Pixel art takes its place among design elements such as posters, logos, animation films, not only with computer games. In the study, poster designs prepared with pixel art are examined and the importance of pixel art for graphic design is mentioned. Considering the examples in the world of digital art, which has a nostalgic image, it is thought that it still maintains its importance and attracts attention.

**Key words:** Graphic design, Pixel art, Poster

#### ÖZET

Piksel sanatı sayısal sanatlardandır. Yan yana gelen piksellerden oluşan piksel sanatı ışık ve renklerden oluşmaktadır. Çözünürlüğü düşük olan ilk oyun örnekleri piksel sanatına örnek olarak verilebilmektedir. Zamanla kendini teknolojinin değişimi ile birlikte geliştirmiş olan piksel sanatı kendini geleneksel sanatta alanlarından kanaviçe, mozaik, boncuk işlemlerin yanı sıra dijital sanat alanında da pek çok örnekte göstermeye devam etmektedir.

Çalışmada piksel sanatının nasıl ortaya çıktığı, kullanım alanları ve piksel sanatı örneklerine yer verilmiştir. Piksel sanatının tasarımlarda yer alması ile birlikte tasarım alanındaki öneminden bahsedilmiştir. Piksel sanatının bilgisayar oyunları ile kalmayıp afişlerde, logolarda, animasyon filmleri gibi tasarım öğeleri arasında konumunu almaktadır. Nostaljik bir görüntüye sahip olan dijital sanatın dünyada yer alan örneklerine bakıldığında hala önemini koruduğu ve dikkatleri üzerine çektiği düşünülmektedir.

**Anahtar Kelimeler:** Grafik tasarım, Piksel sanatı, Afiş

## 1. INTRODUCTION

Graphic design includes a wide variety of disciplines at the same time. Advances in technology have allowed the development of digital art and have also digitized graphic design. "Computer Art, in other words, Digital Art emerged in the last quarter of the 20th century and came to the fore almost simultaneously with the computer. The first artworks and experimental research on the computer allowed the increase of all new and modern art forms created in the digital environment (Tuğal, 2018: 105). Pixel art, a form of digital art, is the smallest display unit in a picture. "Pixel art is a type of software-created digital art in which images are arranged at the pixel level. Such graphs come from 8-bit and 16-bit computers and video game consoles, as well as limited systems such as graphing calculators. Generally, the colors used in pixel images are quite limited. Some pixels are used only in two colors (Wikipedia, n.d.). The meaning of the word pixel is formed from the compound word 'Picture element', which is used to mean picture piece. The term 'pixel' was created by using the letters 'pix' in the word 'picture' and 'el' in the word 'element' (Parmak, 2018: 34). Pixel artists have rendered vector shapes with resolution to emphasize the aesthetics of pixels by producing low-resolution works (Inglis et al., 2013: 25). The high number of pixels in the pixel art works shows that the resolution in the works is high. "Each pixel stores its own color data on the digital screen, it can be in set of three RGB (Red, Green, Blue) or set of four CMYK (Cyan, Magenta, Yellow, Key)" (Yılmaz, 2018: 4). The 'pixel-per-inch' (pixel density) ppi values in the pixels are very important.

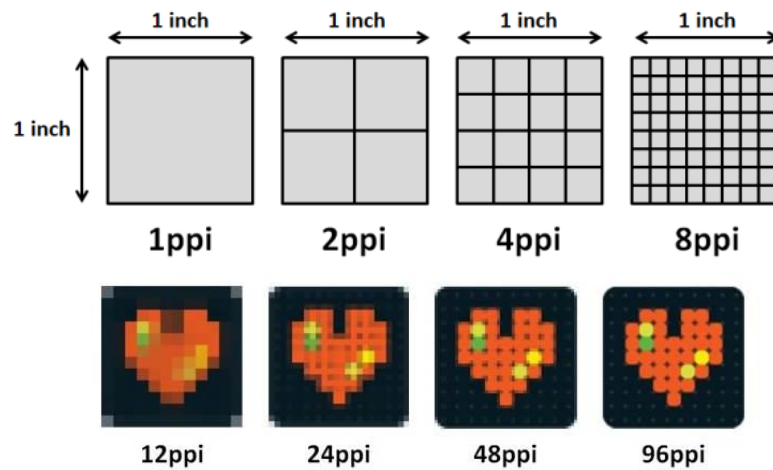


Image 1: PPI Values in Pixel Studies  
Source: <http://fragtist.com/mobil/ppi-nedir/>

According to the number of pixels per inch, the work in Image 1 shows how blurry and clear the colors look. The large number of pixels used in the studies means that the work will have a clearer image, and the low number of pixels means that there will be less detail in the study and it will have an image with more pixels. Based on this situation, the fact that images have too many pixels in pixelated works also means that it is a long-term study. Studies in pixel art are grouped under two separate headings as isometric pixel and non-isometric pixel studies.

In isometric pixel studies; these studies have a certain angle. “Scenes prepared with a perspective where we look at the scene from the upper diagonal corner without using a three-dimensional design program look more pleasant and realistic. This angle is an angle used especially in electronic strategy games (Sönmez, 2008). With the isometric angle, two-dimensional works are given a three-dimensional effect. With the isometric angle, it is ensured that the players dominate the field more, especially in the games.



Image 2: Example of Isometric Pixel Game Design  
Source: <https://tr.pinterest.com/pin/343610646540733693/>

In non-isometric pixel works, there is no perspective view. The works have an angleless view since there is no perception of side, top, bottom and front facades. Non-isometric studies are also called “planometric”.



Image 3: Example of Non-isometric Pixel Art

Source: <https://designbundles.net/tartila/997948-pixel-art-landscape-summer-ocean-beach-8-bit-city-?ref=1vvdv8>

Non-isometric pixel art works, which are generally used for platform games, welcome us with a flat screen. Both pixel working techniques are quite remarkable for art lovers as well as entertaining for gamers and pixel working lovers. Pixel art, which has an important position day by day, shows itself more in graphic design works.

## 2. USE OF PIXEL ART IN GRAPHIC DESIGN

Pixel art is used in many works as well as logos, emblems, posters in the field of graphic design. When we look at the examples of pixel art in the world during the development period of computer technologies, pixel art has emerged by reflecting different colors on the screen in vector rays, led bulbs (Lyon, 2006). The development of technology over time has increased the popularity of pixel art, and graphic artists have created a workspace for themselves. In general, digital workspaces are called a branch of art (Zagrobelna, 2014). “Today, the inevitable proliferation of smartphones and the necessity of producing graphics for small screens have made pixel art a popular technique again” (Hausfeld, 2016). Pixel art also takes its place among the branches of art (Sağlamtimur, 2010). The colors used in the pixel art works are under the control of the artist. Although the developing technology has positively reflected on pixel art, the colors in today's works are limited to a maximum of 64. In small-sized works, the number of colors varies between 10 and 20. Unlike other works of art, the high number of colors used in pixel works suggests that it is not a planned study.

Pixel artists such as JaeBum Joo and Paul Robertson created the first examples of pixel work that left their mark on pixel art, with interface designs, advertising posters and masterpiece paintings for phones.



Image 4: Example of Pixel Art Work  
Source: <https://www.ertankanur.com/pixel-art-nedir/>

Pixel design is frequently used in mobile game designs, and it is also a very suitable technique for small screens (Yue et al., 2012). It is easy to make changes on the pixels used in the works. Contrary to the popular belief in pixel art, large-scale works are much more difficult and detailed. As the details come to the fore in the works, they are far from appearing as real.



Image 5: Pixel Istanbul Map Study  
Source: <https://www.cumhuriyet.com.tr/haber/cizer-tarik-tolunaydan-pixel-pixel-istanbul-haritasi-1761524>

"Haydarpaşa Panorama", made by the artist Tarık Tolunay in 2017, contains a lot of details about Istanbul. The work brought together by complex layers clearly reveals the remarkable beauty of Istanbul. In the era when digital art dominated the work in the field of graphic design, it would not be possible to skip pixel art.

### 3. RESULTS

Although digital art works are up-to-date, their origin bears the traces of traditional art. Digital art is influenced by other branches of art and therefore digital art works are constantly differentiating. The micro details of pixel art as one of the branches of digital art are quite exciting and attract attention. Although it is based on the game Atari Pong, which appeared in 1972, it is thought that the art of carpet, rug, cross-stitch and mosaic are also included in pixel art. In the research, it is found that pixel art gave very impressive examples in the years 1970-1990. Pixel art maintains its importance and gives good examples with the opportunities offered by the developing technology over time. The use of pixel art in the digital world as well as in many fields is thought to draw attention to the nostalgia appearance of pixel art.

While pixel art is being reconsidered by the artists, it is constantly updating itself with the developing technology and different techniques in new works. With its developing new face, it is not only a branch of digital art, but also shows itself in the promotions of world-famous brands, wall decorations, phone screens,

games and many similar areas. In addition to the studies carried out in the world, the fact that very successful examples have been found in the studies carried out in Turkey brings with it the idea that pixel art will be more popular with each passing day.

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