Conference Paper

# Characteristics of Design as an Academic and Creative Discipline

**Al Momani Khaled Nabil**
Graduate student, Ural Federal University, Yekaterinburg, Russia

## Abstract

This article analyses research related to graphic design in the field of education and gives an overview of multiple definitions given in specialized literature regarding graphic design and design research. Design research provides an important blueprint for many other areas of practical research in contemporary society. The methodology of graphic design is transferable – it can be utilized not only in graphic design as such, but also in other areas, including management, business, and marketing. This process has been facilitated by the development of an academic research base, including doctoral programs. Due to the insufficient number of works on graphic design, it is necessary to venture into the other areas, such as industrial design, architecture, and engineering, which have a larger number of studies in the field of education. To prove that graphic design can affect the educational environment, it is necessary to study the nature of design as project research and design process.

**Keywords:** design, graphic design, education, character design, industrial design, design thinking

Corresponding Author:
Al Momani Khaled Nabil
cylosound@mail.ru

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## 1. Introduction

Literature review shows that “graphic design research” in education, and research specifically focused on the role of transfer and reflexive practice in graphic design research, are limited. This is not surprising given the history of design research in general. Although the practice of design has a long history, design research is more modern, especially compared to other fields of research, such as technical and human sciences [1].

Design research ”became a recognizable field of study in the 1960s, initially marked by a conference of design techniques at Imperial College in London, 1962” [2]. This led to the creation of the Society for Design Research (DRS) in 1966. D. K. Jones, one of the initiators of the 1962 conference, founded the graduate school of design studies at the University of Manchester Institute of Science and Technology, and L. B. Archer, with the support of M. Black, founded the graduate school of design studies at the Royal College

of Art. London has historically been the first place to study design. [3] The society for design studies has always aimed to ”promote the study and exploration of the design process in all its many fields” [4]. Therefore, its purpose to act as a form of a scientific society, adhering to a scientific and independent approach to the design process.

Some of the design techniques and design studies emerged after the World War II and lie at the heart of operational research and management decision-making techniques, in the development of creative techniques in the 1950s and the emergence of computer problem-solving programs in the 1960s. B. Archer says that ”the most fundamental challenge to traditional design ideas is the growing support for systematic problem-solving methods, borrowed from computer technology and management theories, to evaluate design problems and develop design solutions.” [5] H. A. Simon laid the foundations of a ”science of design”, which is ”a collection of intellectually sophisticated, analytic, partly formalizable, partly empirical doctrine about the design process”[6].

## 2. Materials and Methods

### 2.1. Design as an academic discipline

Design incorporates a large number of disciplines conditioned in various forms and contexts. Here the designer finds problems and solutions through the more traditional disciplines of design: architecture, landscape architecture, interior design, industrial design and graphic design [7].

Common topics include the practice of developing visual solutions through the use of typography, illustrations and images to create with them – branding solutions, print media, advertising, and packaging.

In AGDA (the Australian Graphic Design Association [8]) graphic design is described as a problem-solving process that requires creativity, innovation and technical knowledge, understanding of the customer, product or service, the goals of their competitors and the target audience, as well as visual solutions are created through manipulation, combinations and use of form, colour, images, printing.

The discipline of graphic design continues to evolve, and recent developments include interaction with digital media including interface design, broadcasting and interactive media (international council of graphic design associations [9]).

The terms ”AG” and ”visual communication” are increasingly associated with the description of graphic design Australian graphic design Association.

In graphic design, numerous design definitions are well known, and there is general agreement that the design process can be described in simple terms [4]. Central to the graphic design process is the activity of thought and planning, which leads to goals Friedman [10], in other words, actions aimed at changing existing situations in preferred situations Simon [11]. An innovative design component is not so much “what is made” as “how is it made” [12]. The design process typically leads to the development of an artefact, service, or structure, but it is the result of the design process, not the design itself Friedman [10].

## 3. Discussion

### 3.1. Design process

Design process at a basic level can be described as ”a certain sequence of events, actions, or methods by which a procedure or set of procedures to achieve a goal leads to a goal or result” [13].

The UK design Council States that ”the design process consists of several activities and methods that are linked in a way that meets the requirements of the task or project.” [14]

A more detailed description of the design process can be problematic due to significant differences present in different cultures and design contexts.

The consensus in the design industry is that there is no established best practice for the design process. This is echoed by D. Clarkson and K. Eckert who state: ”Despite extensive research conducted since the 1950s, there is no single model that would agree to give a satisfactory description of the design process” [15].

However, there is general agreement that there are some commonalities between the different processes used, and they usually consist of separate phases, including cyclical and iterative activities.

That is, the design process is not in a linear format, but in a constant cyclic process and repetition of actions, requiring a flexible infrastructure that allows you to respond to creative changes.

At the same time, it is recognized that a standardized description of the design process is problematic. [15]

### 3.2. Characteristics of the design process thinking model

This model describes a four-step process defined as discovery, definition, development, and delivery. These steps are summarized as follows:

1. Discover: where a design problem is determined by examining a wide range of ideas, with key activities that include identifying user needs, analysing market research, trends and other sources of information.

2. Define: where the combination of ideas or directions identified during the discovery phase is analysed and synthesized into a brief, with key activities including project development, project management, and project signing.

3. Develop: where design solutions are created, repeated and tested, key activities including interdisciplinary operational visual management, prototyping techniques, and testing are carried out.

4. Deliver: where the final design concept is taken through final testing, signed, produced and launched, followed by product evaluation and feedback cycles while it is possible to define and describe the characteristics of the design process, Best in his *Design Management* suggests that this process rarely follows a linear format. [13]

The design process typically involves iterative reprocessing and iterative activities, and it is important to provide flexibility to allow for response to creative changes. [13, 14]

## 4. Conclusion

The article illustrates how graphic design can help in scientific research, as well as in creative and logical development through the design stages adopted in graphic design (design thinking). The methodology can be used not only in graphic design but also in other areas, including management, business, and marketing. A design study that ”came of age” in the 1980s continues to expand. This process has been facilitated by the development of a research base, including doctoral programs, in many design schools, which were previously art colleges.

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