

## The Research of the Establishing a Design Process Framework for Museum Exhibition Design

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**Abstract:** Museum exhibition styles have changed remarkably over the past few decades because they have generally followed the evolution of social and cultural circumstances and the adoption of new technology. Today, exhibition design is important element for establishing a more professional status for museums and other institutions (Velarde, 1990). The study provides theoretical application by proposing a particular form of inter-disciplinary museum exhibition design framework. The outcome of this study, therefore, is to create a conceptual design concerning the following approaches will be:

- (1) A conceptual framework for the design planning that allows designers to cope with the complexity of co-ordination between all participants involved museum exhibition design.
- (2) A multi-disciplinary systematic framework which can be described as a plan of design activity, particularly for museum exhibition design to achieve design aim.

Keywords: museum exhibition, design process framework, inter-disciplinary, curator, multi-disciplinary.

### 1. Aims and purposes of the study

In the past few decades museum exhibition design processes have been adapted from architectural planning. Such design processes (e.g. The RIBA Outline Plan of Work, 1973) were developed to cover the architectural aspects. As museum management becomes more sophisticated, exhibition design becomes technically more complex and specialized and a specific design process in terms of the museum context becomes increasingly important.

There have been very few theoretical or practical design and planning studies (e.g. Lord and Lord, The Manual of Museum Planning, 1991) relating to the development of museum exhibition design. As museum objectives and activities become more complex, museum exhibitions require design and planning of all aspects in order to demonstrate museum roles and functions efficiently. Particularly, there is growing awareness that a 'design' process is necessary to undertake museum exhibition development. The aim in this

research is to develop a systematic design process model which allows designers and curators to cope with the complexities of multi-disciplinary design working as well as meet curatorial requirements in the museum exhibition context. In particular, this study is developed to address following objectives:

- (a) To identify the characteristics and concepts of the design process as they relate to museum exhibition design;
- (b) To establish the benefits of the application of design theory to the practice of museum exhibition design.

**2. The role of museum exhibition design contexts**

Exhibition development is a complex activity which is expanding beyond the design discipline (Dean, 1994). Various kinds of specialists have brought a new perspective to museum exhibitions especially in terms of digital technology which has had a major impact on the design process in museum exhibition development.

Developing exhibitions in museums has involved two major aspects, one is the curatorial context concerning the roles and functions of the museum and another is the design expertise concerning planning, design and production of graphics, products and space. In order to achieve museum exhibition aims, such design expertise needs to associate with technical and other disciplines (e.g. educators and scientists) to carry out its tasks.

**2.1 Multi-disciplinary museum exhibition design**

In particular, conducting inter-disciplinary museum exhibition projects is more complex than many other design projects. Managing them involves monitoring the planning, design and production phases and co-ordinating multi-disciplinary decision making. Because the diver features of museum exhibitions, they require the active participation of different professions as well as a specific curatorial approach.

Traditional museum exhibition design practices are being increasingly replaced by multi-disciplinary practices, which encourage and ease information transfer between professions (Figure 1). The successful performance of a large multi-disciplinary project requires enormous co-ordination to ensure all parties are constantly aware of the ever changing status of the project, so that design mistakes may be eliminated and design process kept smoothly.

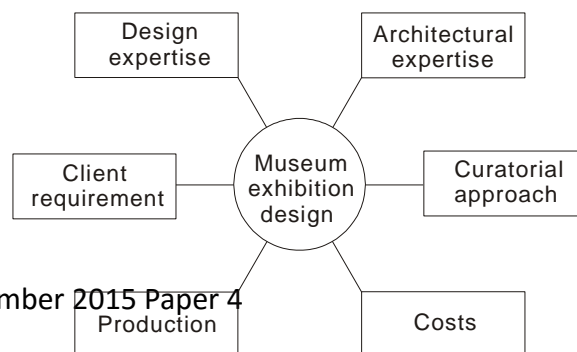


Figure 1: Multi-disciplinary museum exhibition design

## 2.2 The museum exhibition design approach

The theory of museum exhibitions and their practice, unlike many more recent professions, remains a singular design-based development (Thompson, 1986). Designing a museum exhibition is becoming a complex process that requires a multitude of decisions to ensure a smooth progression after establishing the client's needs. Museum exhibitions communicate with people by adopting different types, functions, sizes and approaches to visitor experience, such as displays, collection and exhibitions (Hooper-Greenhill, 1994). The main purpose in putting exhibitions in museums is to communicate and interpret museological theories. The way an exhibition communicates should provide a very attractive visitor experience with the opportunity for observation or hands-on experiment resulting in pleasure, entertainment and the acquisition of museological knowledge (Belcher, 1991).

It is essential that useful techniques are applied to achieve museum exhibition tasks. The design process model for museum exhibitions consists of participants and design information flows, which are the key elements producing the design approach.

There is a growing awareness that other disciplines are necessarily interrelated and co-operate in the flow of museum exhibition design work to carry out design tasks. Undertaking the museum exhibition design process involves available and reliable information flowing between tasks at all levels. Managing design information increases success in improving and accelerating the delivery of design ideas during the design process, as well as coping with the many complexities of developing museum exhibitions.

## 2.3 The task of museum exhibition design

The traditional purpose of the museum has been proposed as historical object display. Many museums have now defined their roles not only as preservation, collection, maintenance and research but also exhibition and education. These now form the basic roles of museum activities. (Dean, 1994; Belcher, 1991; and Hooper-Greenhill, 1994). The tasks and functions of museums are currently considered within design development which includes design specifications and museum criteria (Belcher, 1991). Both factors involve important interactions between the professionals concerned: architects, designers, curators and other specialists, and ensure that museum exhibition design fulfills museum objectives (Lord and Lord, 1999). The design tasks range from overall design concepts, visual expression, three-dimensional objects of an exhibition to the detailed specification of

particular exhibit requirements and systems.

### 3. Museum exhibition design criteria

As a research objective, the ‘Museum Exhibition Design Process’ (MEDP) model cannot exist without investigating the specification of design and the roles and functions of museums. The purpose of identifying museum exhibition design criteria is to create a sophisticated interpretation of museum expertise. Miles, et al. (1982, p.2) claim that there are two considerations in designing an exhibition, which are 1): what objectives are to be defined and 2): how such objectives once identified, can best be achieved. Recently museum exhibitions have been facing several challenges, including an increased rate of innovation, the increased requirements of museum visitors, and transforming new technologies into exhibition phenomena.

During and after as well as before the work undertaken to develop the project, the client (normally museum curators) can introduce requirements that impact on designers’ decision-making and influence design task flows. From the viewpoint of the client, exhibitions involve policies, strategies and technology that determine the role and function of design (Figure 2).

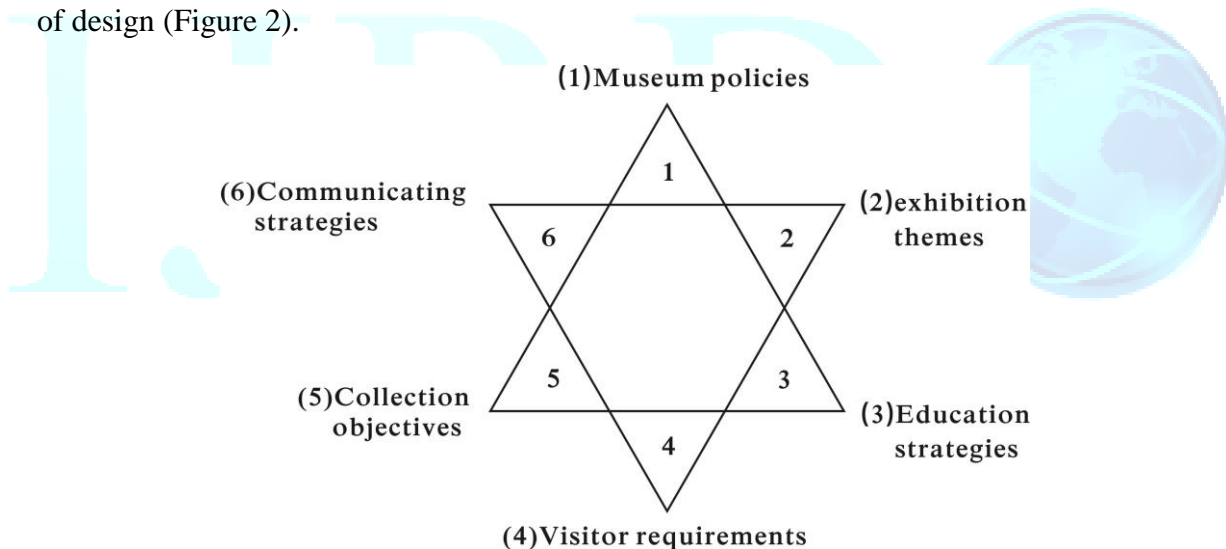


Figure 2 Museum exhibition design concerning curatorial roles

### 4. Developing the museum exhibition design framework

This study has developed into a structured way to enhance inter-disciplinary museum exhibition design work. The view taken by this research is that a design process provides the system necessary for the identification of appropriate user needs and the realization of information necessary to create product concepts (Pugh, 1991). Therefore, a particular design process will be developed to identify the basic properties of roles for museum exhibition design.

The plan for designing a museum exhibition should clarify the parties involved in its

direction and provide a pattern for a ‘project development team’ rather than a ‘design team’ alone. Collaboration is needed to initiate the development of the design project. Collaboration is an active principle to and involves negotiation, agreement, and discussion in order to carry out decision-making in the design process (Chiu, 2002).

#### 4.1 Formatting the design process framework

This stage identifies the problems in enable members of the design team to prepare resources and museum objectives. The development should allow each participant to contribute to the project. Once particular tasks have been identified, specific work stages will assist participants to achieve the project objective. To improve the productivity of the design process, an adequate briefing process should guide designers in generating ideas.

Roozenburg and Eekels (1995) stated that the design process offers the basic cyclic function which begins with problems and ends with problem-solving. The MEDP framework therefore needs to emphasise criteria for the following stages: (1)Project planning, (2)Feasibility study, (3)Outline proposal, (4)Design development, and (5)Production.

An outline framework addresses the various stages by effectively co-ordinating the transfer of information amongst different tasks and disciplines (Figure 3).

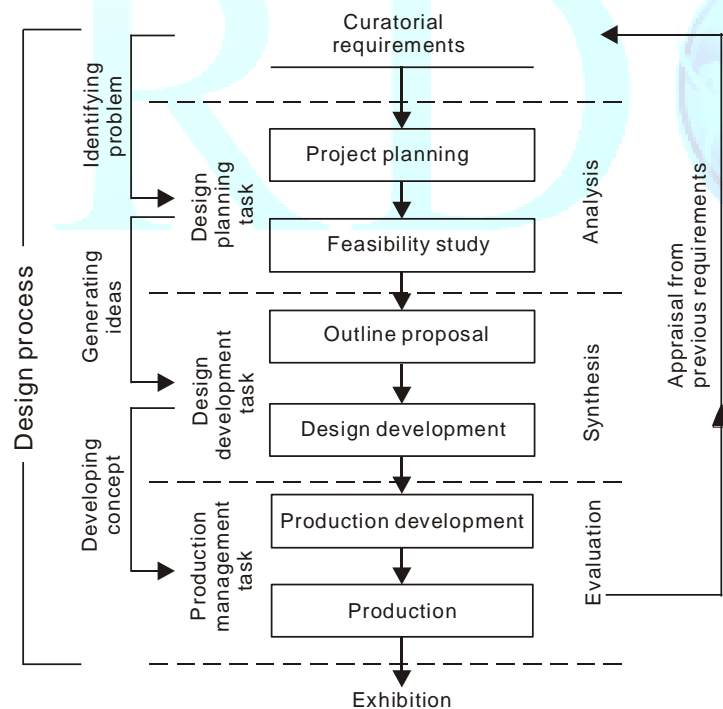


Figure 3 The outline MED framework

In this outline of design method, the phases where ‘analysis’, ‘synthesis’ and ‘evaluation’ are important parallel the ‘planning’, ‘design’ and ‘production’ tasks in the framework. The result of mapping the overall design process showed that certain design activities were vital for developing design projects and especially that the framework

should enable every person who participates in museum exhibition design to adopt the design process model.

#### 4.2 Establishing the MEDP framework

The result of mapping the overall design process showed that certain design activities were vital for developing design projects and especially that the framework should enable every person who participates in museum exhibition design to adopt the design process model. The MEDP framework consists of four phases to accomplish the research objectives: Phase 1 specifies the background of the MEDP framework; phase 2 defines museum exhibition design principles of the process model that helps participants have a clear understanding about the project; Phase 3 draws out a set of design practice guidelines which maps the activity of all participating groups, and; Phase 4 provides documentation which defines the project enabling all participants to carry out their tasks.

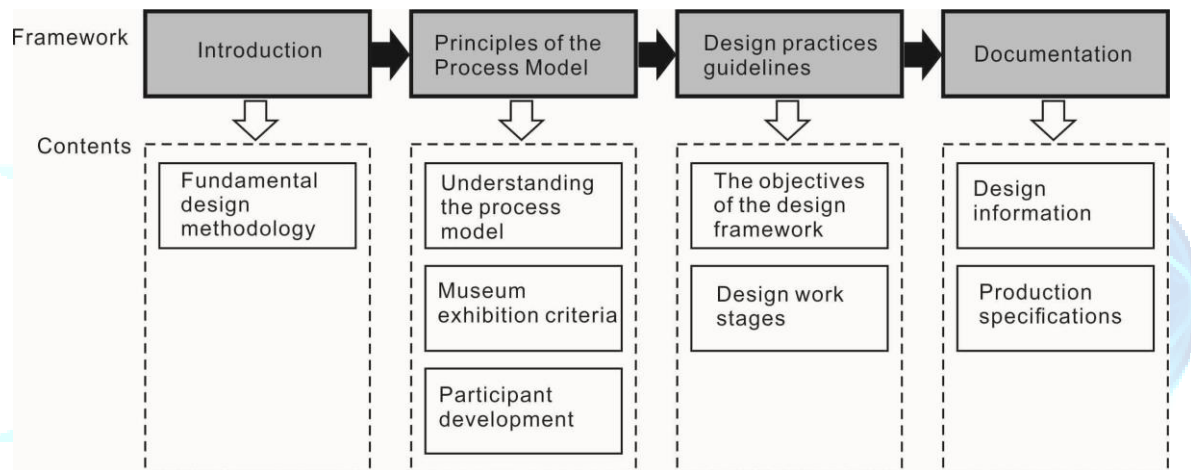


Figure 4 Preliminary design framework

Figure 4 shows a preliminary design framework which integrates various aspects of a museum exhibition. The framework is prescriptive in that it indicates how the participants should work together more systematically. The MEDP framework depicts what activities should occur in the design process, rather than how the activities should be implemented.

The MEDP framework is constructed of key elements which are concerned with the problems identified in the surveys and studies. In enabling all the participants to communicate at appropriate points the framework should enable simple but essential predictions of problems that might happen in the future. It would be advantageous if the model could include a testing function to ensure future exhibition production or services are firmly aligned to user requirements.

The MEDP sets out in a logical form the activities for the designer and museum curator (who normally represents the museum as the client) necessary for the successful

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completion of the project. The MEDP framework develops two approaches, one of which is as a management guideline for the museum curator and the other is as a concept development guideline for the exhibition designer. Both utilize specialists and other project participants in the fulfillment of these roles.

The purpose the MEDP framework is to set out the most efficient design method for project participants to transform design information (e.g. the design specification of an interactive exhibition) in to alternative design concepts, then from design concepts to real exhibitions. The concern of the design process is museum exhibition context. The requirement for design expertise is to identify exhibition criteria and form the group of design disciplines to ensure the design work fulfils exhibition objectives. The aim of developing the process model is therefore to:

- provide a structure that can embrace the many problems that arise during the definition and development of a design;
- provide a sequence of procedures that enables a design to be elaborated which solves problems;
- enable all the participants in the development team and other interests in exhibition development to communicate and understand each other; and
- allow design options to be considered and their implications to be identified.

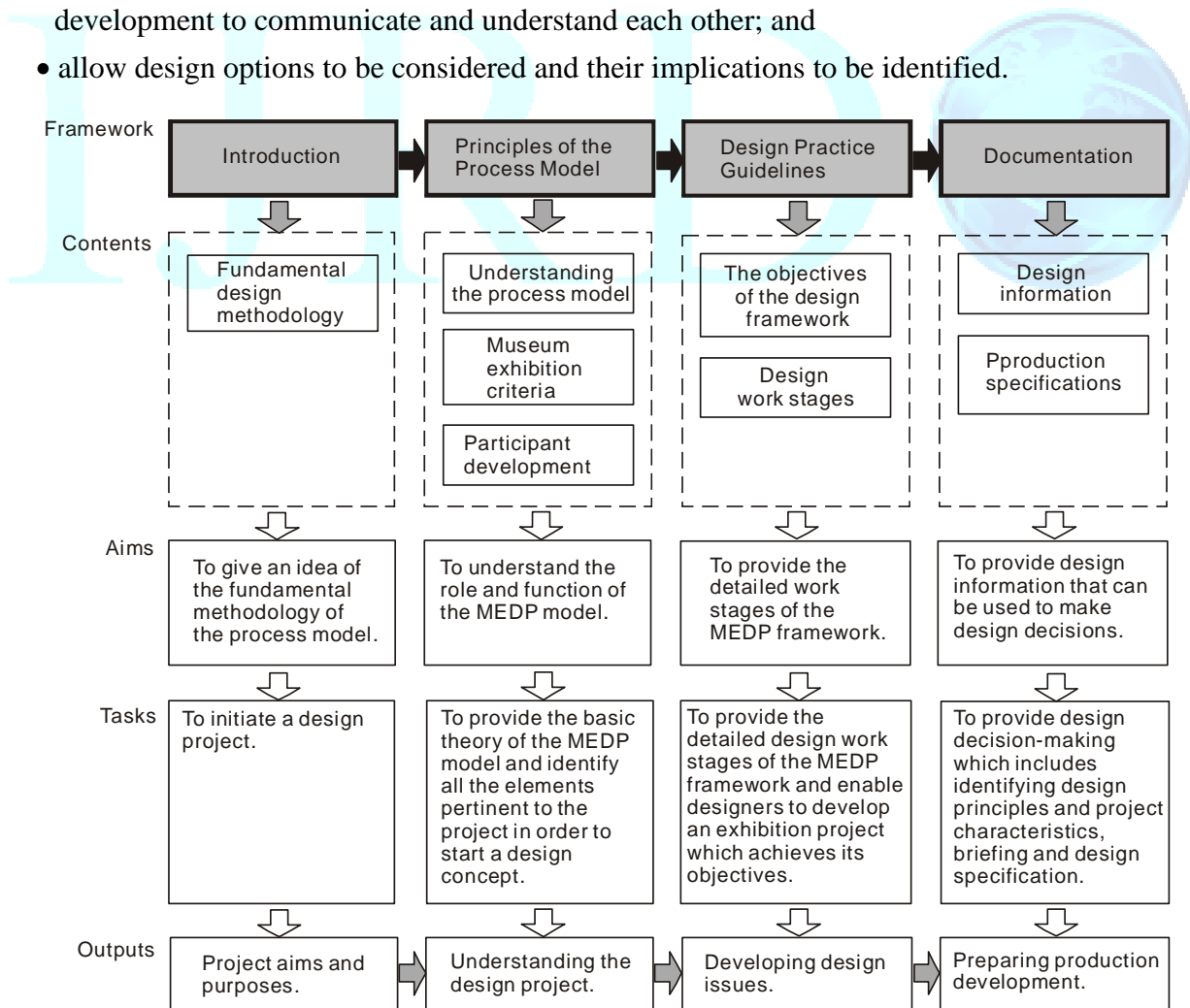


Figure 5 Museum exhibition design process framework

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The MEDP framework being developed, identifies the role of curatorial requirements as critical for project participants in making the process model functional and workable. Such a framework should enable all participants in the development team to examine their requirements, and to establish an understanding of how to adapt project criteria to design work.

The framework is intended to present design information and techniques based on a multi-disciplinary viewpoint, and form the basis of a specific design planning method. The appropriate use of the process model is ultimately achieved by a combination of development and design work.

## 7. General conclusions

It is essential to think of the museum exhibition as a 'live' activity. First of all, when the exhibition is placed in museums, it defines a particular meaning for the exhibited objects. Secondly, the exhibition can be arranged in a number of ways (e.g. historically, theoretically, interactively and non-interactively). Finally, the exhibition is the key method visitors use for interpreting the museum's ideas and that the museum can use as learning experiments.

The MEDP framework considers many factors such as design methods, user requirements, feasibility, design changes, and decision-making. Effective use of design information is a key feature of the framework to improve the productivity of the design process and ensure the quality of the exhibition.

This design planning framework has a number of properties. Its application in real practice is more complex than any other design processes intended for this purpose. The framework enables participants to understand the various disciplines that are involved in the design project. It is constructed to develop a clear understanding of the museum exhibition design process and determine: (a) the key activities performed by each role; (b) the information flow between tasks at all levels; (c) the design team needed to perform the process; (d) the design stages necessary for an efficient approach to planning; and (e) the general forms of design output.

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