



Selected highlights from the course of a **MADE Project** carried out by first-year students of architecture in the summer term of 1988 are described in brief below.

Preparation stage

The lecturer received a proposal from the Administration of the GRUGA¹ Park² in Essen to have the students design a 'Spielhaus' for children on the basis of an existing milkbar which was no longer in use.

The "client" not only proposed allowing the students to help realize the selected design, but even declared his willingness to pay them a fee. The only document provided was an incomplete and inaccurate layout drawing of the existing site. A user survey proposed by the lecturer was vetoed by the park authority.

Organization stage

To perform the **MADE Project** in the best possible manner, the lecturer was now obliged to devote attention to teaching procedures and design activities, and their related organizational problems, one of which was the fact that the University of Essen does not provide students with drawing boards or other relevant facilities for design work, thereby necessitating them to perform their work at home. They only "commute" to the university for lectures, seminars and the correction of their designs. The lecturer's decisions with regard to the course requirements (e.g. for the achievements expected of the students and the schedules to be maintained) were thus set down in the **Project Plan** (Figure 0: [Project Plan](#)). This included the following:

¹ GRUGA = abbreviation for „Grosse Ruhrländische Gartenbau-Ausstellung“ (Ruhr Horticulture Show), founded 1929.

² The GRUGA Park with the botanic garden is a park landscape of some 70 hectares with a magnificent array of flowers, lawn areas, animals, and facilities for games, sports, and entertainment. Beside the leisure offers like playgrounds for very young children, playing lawn, tennis and table-tennis courts, skating areas, miniature golf ground, pony track, chessboards, climbing hills, etc., there are also places for recreation and rest. (1)

1. Project Task

To design a „Spielhaus“ for children for the GRUGA Park in Essen (Figure 1: [Plan of the GRUGA-Park](#)), using a former milkbar (Figure 2: [Former milkbar](#)) as a starting point.

2. Project Programme (Figure 3: [Project Programme](#))

which specifies, inter alia, the textual and graphic presentation of project results and the dates for submission. These rules on presentation contribute to uniformity and the exchange of information between those involved in the project, and thus permit "more objective" evaluation of the learning results.

3. MADE Process Plan (Figure 4: [MADE Process Plan](#))

serves the purpose of arranging the teaching/learning and design processes in clearly distinct main and subsidiary phases, and can be regarded as a macro-strategy for designing and teaching of those processes. All in all, the Made Process Plan represents a standardized, generally applicable pattern which is compatible with the most divergent specifics of various Project Tasks, and thus has a unifying and clarifying effect on the variety of possible design activities.

4. Project Learning Result Catalogue (Figure 5: [Project Learning Result Catalogue](#))

with two "general goals" and six "broad aims" and the project modules to be worked through for this specific Project Task.

R e a l i z a t i o n s t a g e

MAIN PHASE I : CONDUCTING PRE-DESIGN RESEARCH

In accordance with the **MADE Process Plan** (Figure 4: [MADE Process Plan](#)) and the **Project Learning Result Catalogue** (Figure 5: [Project Learning Result Catalogue](#)) the MADE Project began with

Subsidiary phase A: manage project procedures.

The Project Plan was introduced and explained to five male students.

The project duration covered two and a half months only. This was due to the fact that the "client" needed results urgently.

Owing to this strict time-limit, the project group employed the learning results acquired during their previous **MADE Project „Spielhaus“ BUGA³ '87 in Düsseldorf**. The following results were used:

(Figure 5: [Project Learning Result Catalogue](#)):

B 3 Collect, elicit, select and order relevant information	= Data lists
C 2 Determine, structure and link object users, functions and spaces	= Users→Functions→Spaces Matrix
C 3 Identify, order and group design objectives for the object	= Catalogue of objectives

In contrast, the learning results listed below were discarded, as they had either not been wanted by the 'client' (B 4) or proved to be too time-consuming (C4, C5, D1, E1, E2):

B 4 Carry out and assess user survey	= User survey study
C4 Determine floor areas	= Floor area schedule
C 5 Link the spaces inside and outside the object	= Adjacency graph
D Ability to weight and rank aspects of quality	= Assessment documents
D 1 Select, grade and evaluate quality objectives	= Rating table
E 1 Sketch at least two variant solutions in plans and elevations, scale 1:100	= Variant plans and elevations
E 2 Check and select variant solutions	= Evaluation table

Four hours per week were available for formal teaching activities during term time. The project group met regularly on two days each week and started work as a team with clarification of the Project Task. This process was initiated by

³ „BUGA“ = abbreviation for „**Bund**es**g**artenschau“ = Federal Garden Show

Subsidiary phase B: identify the situation and acquire information

Project module B1: obtain, assess and confirm all information from client

The first stage of this was a joint analysis of the site and local conditions with the group, and a meeting with the representatives of the park authority. This yielded the following information:

- potential users of the „Spielhaus“ are children of up to 8 years, their parents, grandparents or other accompanying adults,
- for reasons of cost, no supervision of the children is planned by the park authority. Instead, parents from the neighbourhood who regularly visit the „Spielhaus“ with their children should assume this responsibility,
- no special concept for such a „Spielhaus“ exists on the part of the authority,
- the „Spielhaus“ is to be used all the year round,
- the project should be carried out as economically as possible.

After carefully evaluating the results of this meeting, the project group was able to move on to

Project module B2: survey existing facilities for the object

of which the first stage consisted in surveying the existing building and its surroundings.

As the task involved complex problems such as taking into account the fact that children of varying ages would be using the „Spielhaus“, in the next

Project module B3: collect and process object literature

the "**Data Lists**" from the previous **MADE** Project „Spielhaus“ BUGA '87 in Düsseldorf were used.

In addition, each student was able to record his own personal impressions and thoughts triggered off by those Data Lists and other sources in his own "**Idea Archive**".

~~Project module B4: Carry out and assess user survey~~

Subsidiary phase B was concluded by

Project module B5: determine and define the object characteristics

The project group had to clearly define the concept⁴ of the object to be designed (GRUGA Park Children's „Spielhaus“). To do that, it was necessary to identify the characteristics⁵ of this object⁶.

Four kinds of characteristics were to be covered, viz.

- > User characteristics
- > Type characteristics
- > Purpose characteristics
- > Inherent characteristics (see [Explanation: Object characteristics](#)).

The following **User characteristics** for the **GRUGA Park Children's „Spielhaus“** were:

- Children of up to eight years
- Parents or other accompanying adults
- Cleaners.

The **Type characteristics** for the **GRUGA Park Children's „Spielhaus“** were derived from the definition of "buildings" as a concept, and the Data List. In consequence, the children's play house belongs to the categories of:

- independently usable, roofed buildings
- non-residential buildings⁷
- hour-by-hour kindergartens.

For the **GRUGA Park Children's „Spielhaus“** building, this resulted in the following **Purpose characteristics**:

- *generally* to protect people, animals or artifacts,
- and *specifically* for children playing in the care of adults.

For the **GRUGA Park Children's „Spielhaus“** to be designed, no **Inherent characteristics** could be discerned, either with regard to the "client" or in the Data Lists.

Subsidiary phase C: plan and ascertain use, gestalt and technology factors

⁴ „*Concept*: unit of thought constituted by those characteristics which are attributed to an object or to a class of objects.

Note: Concepts are not bound to particular languages. They are, however, influenced by the social or cultural background.“ (3)

⁵ „*Characteristic*: element of thought which reflects a property of an object and which serves to form and delimit its concept.

Example: One of the characteristics of the concept „fish“ is „having fins“. (3)

⁶ „*Objects* are buildings, other structures, outdoor constructions and interior constructions.“ (4)

⁷ „*Non-residential Buildings* are for instance: Office Buildings, Stores and Other Commercial, Manufacturing Buildings, Educational, Hospital and Health Buildings.“ (5)

On the basis of the information previously processed, this subsidiary phase aims at giving substance and shape to a design guideline image for the GRUGA Park Children's „Spielhaus“, and at the planning and ascertaining of its use, gestalt and technology factors.

The initial step in this process was:

Project module C1: develop and present a guideline image for the object design in words and pictures.

With the aid of an "A ->B ->C procedure" (see [Explanation: A-B-C procedure](#)), group work was initially carried out in the attempt to set this process of discovery of a guideline image in motion, selecting suitable concepts from the **Project Task**.

All students were able to decide in favour of a single guideline image (e.g. „Gruga-Burg“ - „Gruga-Castle“, „Regenbogenhaus“ - „Rainbow House“, „Spielbergwerk“ - „Play Mine“), and these were then developed into consistent potential solutions right down to the furnishings in

Subsidiary phase E: create and select possible solutions.

As a rule, the next step, namely:

Project module C2: determine, structure and link object users, functions and spaces (see [Principal: Object Matrix](#))

follows parallel⁸ to the concept analysis and the production of a collage. In this particular case, however, it was not performed. Instead, the project group employed the existing Object-Matrix which had already been prepared for the **MADE** Project „Spielhaus“ BUGA '87 in Düsseldorf. This was due to the fact that most of the necessary *s p e c i f i c* functions were also relevant to the GRUGA Park Children's „Spielhaus“ project. Only those specific functions that were not applicable for this particular project were eliminated in the matrix of the „Spielhaus“ for BUGA '87 in Düsseldorf. On this basis the „Spielhaus“ GRUGA matrix came into being.

To ensure that the spaces for the object to be designed (the GRUGA Park Children's „Spielhaus“) function correctly, i.e. that they are capable of fulfilling the assigned functions with regard to use, gestalt and technology in a manner acceptable and beneficial to users,

Project module C3: identify, order and group design objectives for the object

⁸ Parallel for the following reasons:

- to save time, as the process of discovery of a guideline image, to which the students were unaccustomed, and the subsequent representation of this image using „collage“ is as a rule time-consuming
- because the development of the „specific functions“ and the search for a guideline image can have a cross-pollinating effect.

involved the formulation and compilation in a catalogue of objectives of mandatory, recommended, optional and desirable objectives, known in **MADE** as "MUST", "SHOULD", "CAN" and "WISH" Objectives (see Explanation: [Design objectives](#)).

For the **Project Task** GRUGA Park Children's „Spielhaus“, the relevant objectives were derived from the **Catalogue of Objectives** of „Spielhaus“ BUGA '87 in Düsseldorf.

~~**Project module C4: determine floor areas**~~

~~**Project module C5: link the spaces inside and outside the object**~~

MAIN PHASE II : CREATING THE DESIGN

Subsidiary phase D: weight and rank aspects of quality

~~**Project module D1: select, grade and evaluate quality objectives**~~
(see Explanation: [Assessment procedure](#))

There then followed

Subsidiary phase E: create and evaluate possible solutions

~~**Project module E1: sketch at least two variant solutions in plans and elevations, scale 1:100**~~

~~**Project module E2: check and select variant solutions**~~

Subsidiary phase F: complete the Scheme Design

~~**Project module F1: compile final drawings of the scheme design**~~

to produce the drawings for a „refined“ design (see: [Final designs](#)) and

~~**Project module F2: describe final design**~~

with a written **Explanatory Report**.

All the project results were then compiled in the **Project Report** and submitted on schedule to the „client“, the GRUGA Park Authority.

~~**Project module F4: construct a representation model of the object**~~

produced the three-dimensional representation of the „GRUGA Park Children's „Spielhaus“.

Great value was attached to the quality of workmanship, as a model is easier to comprehend in toto than the original. It conveys the complete appearance of the object from inside and outside, from all sides, and with all details.

END

of the MADE Project Children's „Spielhaus“ for the GRUGA Park, Essen

It has in the meantime become customary to exhibit the results of **MADE Projects** from undergraduate courses publicly either in the university or elsewhere, depending on the „client“. The „exhibition“ is seen as a medium to provide the student with specific opportunities to present and „sell“ his or her design. The exhibitors learn to deal with the circumstances of an exhibition and familiarize themselves with the presentation aids required (e.g. uniform presentation for the exhibition, poster design, press releases). Furthermore, they thus check the response to their exhibits, e.g. by a written opinion poll in which visitors are asked to express their criticisms. At the exhibition of the designs for the **Children's „Spielhaus“ GRUGA Park in Essen** inside the very building, the existing milkbar (Figure 6: [Exhibition](#)), for which the designs were made, 162 visitors cast their votes in writing.

Bibliography

(1) Werbe- und Verkehrsamt der Stadt Essen (ed.)
Leisure and Joy of Living in Essen -
The City worth living in
Essen, 1983

(2) American Society of Civil Engineers (ed.):
Manual of professional practice:
quality in the constructed project:
a guideline for owners, designers, and contractors
Prelim. ed. for trial use and comment
Volume I
New York, 1988

(3) ISO International Organisation for Standardisation
Draft International Standard ISO/DIS 1087
Terminology - Vocabulary
Terminologie -Vocabulaire
1988

(4) Architektenkammer Nordrhein-Westfalen (Ed.): Verordnung über Honorare für Leistungen der Architekten und Ingenieure (HOAI) of 1.1.1985 contained in: Architektenjahrbuch 1986/87. Christians & Reim Verlag, Eutin 1986

(5) Statistisches Bundesamt Wiesbaden (ed.): Systematische Verzeichnisse
Systematik der Bauwerke
Stuttgart and Wiesbaden, 1978