

# EXPERIENCES WITH EMOTIONAL DESIGN

**Jeanette Helleberg DYBVIK**

OsloMet, Oslo Metropolitan University, Norway

## ABSTRACT

Emotional design is a designer method as well as a tool for transforming and analysing design objects during the process of design. The focus is on the emotion created between the design object and the user. The paper is further based on raising the awareness of the students of the design process and their reflections and experiences in relation to emotional design. The Design, Arts & Crafts students at the Primary School Teacher programme at OsloMet, the Oslo Metropolitan University, were given the task of designing a cup made of clay. They had to emphasize the various idioms that could give the cup a personal touch in both visual and emotional terms. This can help graduate students resolve challenges associated with the shaping and use of emotional design. The programme seeks out educational and learning experiences for developing pedagogical concepts and strategies that help newly graduated teachers cope with current and future challenges. Donald Norman refers to his theory of human cognitive and emotional characteristics that are linked to our experience of products. This is how you can explain human emotional relationships with products for achieving a deeper understanding of the user's total product experience. Everyday objects always have a history, a reminiscence and something that ties us emotionally and personally to this particular object, this special thing we have.

*Keywords: Emotional design, emotion, design process, everyday objects and creative joy*

## 1 INTRODUCTION

The content of the education at Oslo Metropolitan University (OsloMet) for design, arts, and crafts is based on what graduate teachers are going to teach in primary school. The teaching students were selected as participants because they should carry out a work requirement and the design project would help their practice as a graduate teacher. In this case share and improve design and education teaching and learning experiences with a focus on emotional design. This will also develop pedagogical strategies that help teacher students to meet new challenges in their upcoming teaching job.

In her article *Emotions and Design*, Helle Kristine Hoem writes about a broader understanding and method of the human aspects in product development: *'The way we relate emotionally to products and suggestions for how designers can utilise their knowledge of human emotional aspects in order to design products that appeal to a more nuanced user'* [1].

The research questions in this paper will be:

What experiences do teacher students in art, crafts and design get when they work with emotional design?

## 2 EMOTIONAL DESIGN AND THE DESIGN PROCESS

In this context, emotional design is a method for students in art, crafts and design when they act as designers. This is also a tool that allows students to subsequently analyse the design process. The focus is on the emotional aspect created between the design object and the user. Emotional design is a concept in the field of design. The students have designed a cup in clay and applied criteria for emotional design and the design process. Emotional design strives to create products that evoke appropriate emotions in order to create a positive experience for the user. To do this, designers evaluate the connections that can arise between the users and the objects they use as well as the emotions that can arise out of these. If they are strong, the emotions evoked by a product can affect a user's beliefs. Emotions play a key part in human ability to understand and learn about the world. Positive experiences arouse our curiosity, while negative ones protect us against repeating mistakes. According to Alexander Manu [2], humans form emotional connections with objects at three levels: the visual, behavioural and reflective one. A designer should address human cognitive ability at every level — in order to evoke appropriate feelings

and thus produce a positive experience. A positive experience can comprise positive emotions such as joy and trust or negative ones such as fear and anxiety. Emotional design appeals to the first reactions we experience when we see a product.

### **3 THEORETICAL APPROACHES: EMOTIONAL DESIGN**

The main features have been borrowed from emotional design theory that describes emotional design. Here it is appropriate to borrow from the theories of Alexander Manu and Donald Norman.

#### **3.1 Alexander Manu**

Alexander Manu (1954) is a professor at the Ontario College of Art and Design. He has formulated a methodology he refers to as ToolToys. ToolToys are designs that communicate with the user's emotional side [3]. This emotional side furthers play through desire and joy. Designers must consider their role and the relationship between designer, product and user. It is important to establish direct contact between the end-user's positive experiences. This sees to emotional needs such as creativity, curiosity, wonderment, etc. Moreover, the designer creates good design that is tailored to functional needs.

#### **3.2 Donald Norman**

Donald Norman (1935) is a Professor of Cognitive Science. Topics within product design have been prominent throughout his writing, and he has focused on the relationship between product and user. Functionality and cognition hold particular relevance here. He has written about the emotional relationship between user and product in his book *Emotional Design, Why We Love (or Hate) Everyday Things* (2004)[4].

Don Norman's study of the emotional properties of the human mind distinguishes between three different levels in the brain.

- The automatic, pre-wired level referred to as *visceral design (inner automatic thinking and visual design)*.
- The part that contains cerebral processes governing everyday behaviour referred to as *behavioural design*.
- The contemplative (thinking) part of the brain, or *reflective design*.

These three levels are interwoven with each other, and it is impossible to create a design without involving all three of them. The components work together with human cognition and emotion. Each level plays different roles in the overall functioning of the human mind [4:21].

### **4 METHOD**

The research questions were collecting data from a practical implementation. The students worked innovatively with the theme of emotional design, where they should design a personal cup designed in clay. And emphasize the different expressions that can give the cup a personal touch, both visually and emotionally. They should work with a design process with written reflections and answer some questions. The method also includes observation of the practical work. Students achieve a basic education that will equip them to teach emotional design in primary and lower secondary schools. Examines examples from a qualitative approach—research-by-design. Sevaldson presents a definition of *experimental practice*: 'The practice is experimentally changed and modified to explore and evolve concrete enquiries, research questions or effects' [5:28]. In this context, its research through the ethnological research method of participant observation [6:248-261], [7]. Research-by-design is used as exploration through practical creative work with clay in the design process, where one's own observations in an educational setting and the experiences of the students in the process with emotional design. Research-by-design is then implied in aesthetic terms [5]. The method is used to explore the students' engagement in material consciousness. In this context, it is interesting to note that Bresler emphasises that empathy, execution, and sensibility are qualities that are directly relevant to the research [8], [9]. According to Schön, reflection is silent and unconscious; therefore, it is difficult for the outside world to see when reflection is present [10]. This reflection involves a dialogue between the hand, the head, and regenerate experience through the sensory apparatus. The design project is based on Richard Sennett's [11], [9:120] use of the term 'engaged material consciousness', which is material consciousness that initiates a conscious, craft-based effort to achieve good quality work. This work is

dependent on a curiosity about the materials at hand. Primary school teachers are also obliged to lay the foundation of knowledge for designers as well as for those who collaborate with them or who will utilise what they design.

## 5 DESCRIPTIONS OF THE STUDENT PROJECT

The students were supposed to design a personal cup in clay using emotional design. They had to emphasize the various idioms that could give the cup a personal touch in both visual and emotional terms. They were supposed to use the design process and build up experiences related to it. *The cups were supposed to further an experience of presence for the user through the sense of touch. An experience through an everyday ritual.* Working with the various surfaces of the cup, creating a solution that provides a good grip and drinking function. Figure 1.

35 students answered 4 questions. Underneath are some selected responses from the students. Their experiences were very individual.

*Which feelings and emotions have you worked with when you were making the cup?*

- ‘I have worked with somewhat bleak feelings, anger and sadness. The colours of the cup show a dark exterior. This shows a contrast between how you can appear on the outside and how you feel on the inside.’
- ‘My point of departure has been chaos and order. Organic so that the cup is more lively.’
- ‘I have worked with joy, stress, excitement as well as harmony. I have employed tools such as repetition, contrast, texture and harmony.’
- ‘The idea was to trigger an emotion in order to bring a sense of peace to a stressful everyday life.’

*How did you emphasize the various idioms that could give the cup a personal touch in both visual and emotional terms?*

- ‘As far as emotions go, the cup is personal, because this is an emotion I have felt growing up a lot — an expressionless outside, but a screaming inside.’
- ‘I used various tools to create texture and movement in the clay. I created a tactile surface, with a more exciting expression and personality.’
- ‘I grew up in the woods and wanted to bring this nature into an everyday life that is otherwise full of asphalt. This makes me happy.’
- ‘I believe that the shape and the "handle" give the cup a personal touch. I've never seen myself a cup with such a handle and such a shape. The cup's personal touch visually gives a personal touch emotionally. With different senses one can experience the cup whimsical and fun expressions. The colour of the cup emphasizes the playful shape.’

*How have you worked to promote a presence for the user through touch and the surfaces of the cup?*

- ‘The cup furthers the user’s inner state. The lower edge of the cup fulfils the function of a grip and will thus lie securely in the user’s hands when using the cup.’
- ‘I wanted to bring out a feeling of relaxation while using the cup and have therefore opted for a simple design where the user’s touch and grip take centre stage.’
- ‘When the cup is glazed, it will become completely round and smooth. It is also small; this can make you think of how you should hold it in your hands. You cannot just pick it up like an ordinary cup. I believe that this can help create an emotional presence for the user.’
- ‘I think the cup evokes an emotion such as calm.’

*Human cognitive and emotional characteristics are linked to our experience of products. What do you think about that?*

- ‘I think that the way we perceive products often corresponds to our cultural background and our associations to various objects. Therefore, people’s cognitive and emotional characteristics will be based on their own experiences and cultural background.’
- ‘I believe people will experience the product differently. Colours, for example, can speak and mean different things to different people. And the feeling of drinking from a cup and the meaning thereof can vary. For example, I find it pleasant to drink from a glass with an extremely thin edge.’
- ‘The cup has a playful feel. This playfulness creates joy and a sense of adventurousness.’



Figure 1. Student creations, ceramic cups

## 5.1 Form and Function

Important considerations include the relationship between the shape, function, use and material properties of the products. This allows the student to communicate through the design. Product design is largely about identifying and then fulfilling a need. Creating a cup is a method of doing this that will help students develop their creativity and thinking skills in new ways.

## 5.2 Emotional Design

Emotion, agitation, feeling, affect are a person's reaction to experiences. Emotion is closely linked to a person's motivation. Cognitive (intellectual) conditions are important for emotions, as the respective person's interpretation — *in this case, the cup* — of the situation is decisive for determining which particular emotion is being triggered. For example, patterns can be inspired by nature's surfaces and symmetry or by medieval architecture and ornamentation. Design can affect our feelings. There are lots of products and solutions that create feelings in people. They may be pretty, ugly, exciting or vulgar. Products can also be neutral. Students were very conscious of what they wanted to achieve with their creations. They were aware of what kind of feelings they would play on and how they would affect recipients. This can be done using aesthetic tools such as shape, colour, sizes, etc. Some students went even further. They played with elements such as history, heritage, image, belonging, dreams, romance and much more.

## 6 FINDINGS

Students as designers should not just design objects in order to meet functional needs. They should think of the user as a whole and fulfil needs that go beyond what is visible. When it comes to feelings and emotions that the students worked with, they highlight the following: emotions, anger, sadness, chaos, order, disorder, stress, harmony, texture, contrast and harmony. A cup should not only be designed to have a good drinking function, but should also have properties — tactile, aesthetic — and meet the user's subjective needs. What is the surface of the cup like? What is the shape like? What is the colour of the cup? How is the handle designed? Via their theories, Jordan, Manu and Norman emphasize the need for a transformation of the role of the designer. What are the user's actual needs? Manu wants to give the designer a new role; he is preoccupied with the aesthetic aspect [2]. The students had to look for a meaning and a story in the design of the cup. Some of the students mention their own cultural background as meaningful. Students considered it important to shape a meaning in order to fulfil a user's needs. Most of the students were interested in designing a cup that had a functional grip. And the user's touch and tactile surface around the cup, and a smooth touch. For example, how to hold the cup, it can evoke an emotion as calm. Donald Norman identifies the user's emotional connection to the object [3]. The students experienced what meaning this had for the product — the design and expression of the cup. Some students mention colour as an important component. Colours speak different to different people.

To succeed in their design, the students used emotion as a tool. A criterion the designer must take into account to succeed. I will now detail Norman's three levels and note some observations and experiences.

## 6.1 Visceral Design

Visceral design is about appearance and what nature does to us. The cup here is an excellent example — the students have enjoyed creating it, in particular, when they were in the process of designing it.

Visceral design may also have to do with advertising, folk arts and handicraft. It is about physical properties such as appearance and feeling. When the students were working with clay, they had experiences and automatic reactions that had to do with an immediate emotional impact.

## 6.2 Behavioural Design

Behavioural design is known as *The Design of Everyday Things*. Behavioural design is made up of four components: function, comprehensibility, user-friendliness as well psychological feeling. Feeling was the most important reason behind the product for some of the students. This is supported by Norman's theories. This leads to what Emotional Design means. Behavioural design is about the joy of creating. Focus areas here are both the process of designing the cup and the result. The zest of creation was visible in the ceramics workshop. Behavioural design is also about using. Achievement and own efforts played a key role for the students. This is the aspect of design that users in society focus on.

## 6.3 Reflective Design

Reflective design is about the motivation, rationalisation and intellectualisation of a product. Can the student tell a story about the cup? Does it appeal to the self-esteem and pride of the student? The students liked to show how the cup works and explain how the appearance of the cup shows its condition. The cup also shows us a reflection. It is perhaps not beautiful, and it is most certainly not useful, but what a wonderful story it tells!

## 6.4 Visceral, Behavioural and Reflective Design

These three, extremely different dimensions are intertwined in each and every design. It is not possible to design without the involvement of all three. But more importantly, note how these three components intertwine with both emotions and cognition[3:6]. Emotions are an inseparable and necessary part of cognition. Everything we do, everything we believe is coloured by emotions, much of it at a subconscious level. Older emotions change the way we think and function as a constant guide for appropriate behaviour, leading us on a path away from the bad and guiding us towards the good. The students felt that certain objects evoked strong, positive feelings such as love, connection and happiness.

## 6.5 ToolToy as Playful Motivation

One of the challenges facing the teacher is to choose materials and tools that give the students opportunities for playful and emotional forms of expression. Some students writes that the cup has a playful feeling. This playfulness creates happiness and a sense of adventurousness. Further senses such as whimsical and fun expressions. ToolToys is a method formulated by Alexander Manu[2] for showing the designer the need for redefining the design process. Play and its value expand the perspective of design. The students experienced the usability associated with the pleasures of the play, which Manu considers to be important in relation to user experience. Tool represents a function and a need; Toy represents a desire. The design process is re-evaluated by the designer; in this case, the student, where play takes centre stage. This is a method for the student as a designer to design a cup that gives the user pleasure. Play can bring positive qualities to people. The students amassed knowledge of materials and showed playful approaches to making choices about the kind of emotional expression they should give the cup.

## 6.6 Creative Joy

Creative joy is a topic that became visible in the course of creation of the cups. Emotion and creative joy are triggered by the joy of creative work. Students who have had their own experience and perception of the emotional design process of an everyday object experience creative joy. This is how we can say that creative joy is associated with the process of mastering. What gives creative joy to one person does not necessarily give the same good feeling of mastering to another person. The process of creating a cup, an everyday object, results in a visible production. The problem-solving of the design process leads to creativity and deeper emotional competence. Donald Norman opines in *Emotional Design. Why we Love (or Hate) Everyday Things* that to produce the best effect possible, objects must bring joy to the owner [3:17]. As is the case with Donald Norman's theories, the emotional processes govern the

cognitive. Aesthetically beautiful products generate good experiences [3:15]. The students experienced that the favourite cup they made themselves feels much better than other cups. I saw that the students were glad about working with clay and creating an everyday object. I noticed that some of the students felt that the shaping of the clay can bring out a meaning, an emotional expression or a message using a variety of instruments

## 7 CONCLUSIONS

The students in art, crafts and design have designed a personal cup, whereby they have gained experiences in emotional design. They have experienced the cup getting a personal touch, in both visual and emotional terms. Some have emphasized presence so that the user would get a “here-and-now” experience through touch. Most of them have worked with the various surfaces of the cup, and most have created a solution that provides a good grip and drinking function. Four components in behavioural design: function, comprehensibility, ease of use and mental feeling [4]. For the students, emotion was important. What was new in this study was that the students were supposed to identify and solve a need, that they experienced the joy of creation and applied a playful approach. Moreover, some of the students were more conscious of what they wanted to achieve with what they were creating. Individual students became aware of the kind of feelings they would play on and how they would affect the recipient. Most of the students experienced, via Manu’s theory, that a tool is a function and a need, while toy is a desire [2]. The student as designers experienced that play takes a central role. This is a method for the student as a designer to design a cup that gives the user pleasure. The students gained different experiences with emotional design. The students in arts gained the basic understanding through the work with emotional design. I saw that students showed joy in working with clay and creating an everyday object [11]. I saw that the students experienced that shaping in clay can bring out a meaning, an emotional expression. In this experience students achieved a basic education that will equip them to teach emotional design in primary and lower secondary schools. I will argue that emotional design is a field for further exploration. It can further be investigated how students experienced this basic understanding about emotional design. Importantly, patterns were inspired by nature’s surfaces, and symmetry, architecture and ornamentation were of relevance for the work process. This can be done using aesthetic tools such as shape, colour, sizes, etc. Some students went further on by playing on elements such as history, culture, image, dreams, romance, peace, etc. They were overjoyed of having crafted a product, a cup, with which they were satisfied. Students as designers amassed experiences and understanding that emotional design can be of major relevance for how the user receives objects.

## REFERENCES

- [1] Hoem H. K. *Emosjoner og design En utvidet forståelse av menneskelige aspekter I produktutvikling*, 2005, Institutt for produkt design, NTNU.
- [2] Manu A. *Towards a New Model for Industrial Design*. Design DK 1999,
- [3] Manu A. *From Tools to Toys – Industrial Design in the 1990’s. Design for the Future CETRA* 1992
- [4] Norman D. A. *Emotional Design. Why we love (or hate) everyday things*. (New York: Basic Books, 2004)
- [5] Sevaldson B. A systems approach to practice research in design. *Discussions & Movements in Design Research*, 2010, 3(1), pp. 28. doi: <http://dx.doi.org/10.7577/formakademisk.137>.
- [6] Atkinson P. and Hammersley M. Ethnography and participant observation. *Handbook of Qualitative Research*, 1994, 248–261.
- [7] Hammersley M. and Atkinson P. *Ethnography: principles in practice* (3rd ed.), 2007 (Routledge, London).
- [8] Bresler L. Towards connectedness: aesthetically based research. *Studies in Art Education*, 2006, 48(1), 52–69. Available at: <http://www.tandfonline.com/doi/abs/10.1080/00393541.2006.11650499?needAccess=true>. [Accessed on 2 February 2018].
- [9] Knowles J. G. and Cole A. L. (Eds.) *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples and Issues*, 2008 (Sage Publications, Los Angeles).
- [10] Schön D. A. The reflective practitioner: How professionals think in action. *International Social Work*, 1983, 28(1), 53-55. doi:10.1177/002087288502800110
- [11] Sennett R. *The Craftsman*, 2008, (Penguin Books, London).