

Empowering Craftspeople by Reinforcing Design Skills:

The Case of a Design Training Course for Woodworking
in Kastamonu, Turkey

By Gülay Hasdoğan and Mustafa Hasdoğan, Middle East Technical University

Abstract

Revitalising craft tradition by utilising natural resources and empowering communities by enabling them to discover their local talents can stimulate entrepreneurship and lead the way towards sustainable development. This paper aims to discuss the process and results of a project entitled Increasing employment by integrating design skills in woodworking, carried out in Kastamonu, Turkey, within the framework of a European Union grant scheme for promoting youth employment. The project aimed to integrate design and creative thinking skills in traditional woodwork training in order to discover and support young talents and revitalise local handicrafts. The project comprised of a design and woodwork training programme, involved ninety young trainees residing in Kastamonu with different educational backgrounds. At the end of the project, sixty trainees completed the programme with at least two original design works. Thirty of them were selected to carry out further practice in Kastamonu craft industry. The paper explains the strategies employed throughout the programme to foster creativity and makes recommendations for the conduct of similar studies.

Introduction

One of the major impetuses for sustainable development is revitalising craft tradition. Enabling communities to discover their local talents and encouraging them to utilise indigenous resources can stimulate new forms of local entrepreneurship. Re-establishment of local practices may have implications for product design such as exploring different user needs, creation of diverse products, receiving effective user feedback and for developing ethically responsible and sustainable solutions (Dogan and Walker 2006). Handcrafted products have a power to convey local heritage through vernacular forms (Kouhia 2012). Since traditional crafts involve practices based on local knowledge that are accumulated over time, they have potential for developing new products which can represent cultural values and build identity in the global market (Tung 2012). Since the learning process in traditional craft practice is usually carried out through copying existing artefacts and practices, introducing design thinking and design education principles to craft practices can be an efficient method to encourage creativity and to empower craftspeople.

Turkey has a large majority of its population formed by the younger generation and has a relatively high youth unemployment rates compared to other OECD countries. Vocational training, promoting entrepreneurial activities and employment consultancy services are among the national employment policies applied in Turkey within the framework of the European Employment Strategy (Bayrakdar and Incekara 2013). Inline with these strategies, training programmes aiming to revitalise local craft skills were developed during the last decade, utilising European Union grant schemes, one of which is presented in this paper.

Traditional craft education is based on copying previous works of masters. This is because in a craft-work, form is developed after several trials of making. Once a perfect form is reached it is copied to sustain mastery. Consequently, a craft object embodies practical knowledge of people who have mastered it, which is transferred to craftspeople from generations to generations (Cross 2007). Therefore the act of copying is also the process of discovering and learning the knowledge embodied in the craft object. This discovering and learning process is practiced through making. For this reason, traditional craft education entails actions of understanding, appreciating and making before practicing any action of creativity. An apprentice would practice creativity after reaching to a level of mastery. Thus, in craft practice, novelty is attained after an evolutionary process.

The roots of design education dates back to the industrial revolution, when the conception or plan of a product was separated from its making. According to Heskett, initially, imitations of craftwork with historical styles were produced industrially. Later with the growth of capitalist industry and the expansion of markets, when traditional forms could not meet the consumer's demand, it became necessary in product sectors to generate new ideas for products. Competition between the manufacturers required continuous change in the appearance of products to stimulate markets (Heskett 2001). Therefore craftsman's mastery on making evolved into designer's mastery on idea generation. In design education the creative process starts before the production (making) process. Therefore mastery is acquired during envisaging the final form via sketching, drawing, model making and digital modelling. Novelty is expected at the end of each design process.

Turkey has a rich tradition of handicrafts having its roots in the Ottoman Empire ranging from metalwork, pottery, stonework, and woodwork to clothing, textiles, carpet making and embroidery. During the decline of Ottoman Empire, especially in the nineteenth century, since the handicraft products could not compete with manufactured products in the West, craft production was weakened. Since industrialisation and introduction to the free market economy was late in Turkey compared to western countries, industrial design as a concept also arrived late not being relevant to local handicraft practice.

In order to support economic growth through design in developing countries including Turkey, firstly International Cooperation Administration (ICA) of the United States, later its successor, Agency for International Development (AID) made several efforts. In 1955, ICA assigned Peter Müller Munk Associates to help Turkey to raise the quality of their craft products and export them. However, this assignment was not successful (Er et al. 2003). In 1969, AID appointed American Industrial Designer David Munro to establish the department of Industrial Design at METU. Between 1970-72 he gave elective courses on industrial design, and made correspondences with large scale manufacturing industries in Turkey.

Industrial Design undergraduate programmes in Turkey started firstly in Istanbul State Academy of Fine Arts in the early seventies. Secondly, in 1979, Department of Industrial Design was founded at Middle East Technical University. Educational curricula of both departments were influenced by modernist educational approaches of the West, targeting at large scale manufacturing industries of Turkey.

Craft education is programmed with traditional methods in vocational schools at high school level and by certificate programmes and training courses as part of continuous education schemes. Being governed by different type of educational institutions, at different levels, today, design education has little influence on craft education in Turkey.

Integrating design skills in woodworking

This paper presents the process and results of a project entitled Increasing employment by integrating design skills in woodworking co-ordinated by Kastamonu University, conducted between March and November 2011 in Kastamonu, Turkey, within the framework of a European Union grant scheme for promoting youth employment. Kastamonu is located in the North of Turkey, in a forested area known with its craft tradition especially in woodworking. The project consisting of a design and woodwork training programme, involved ninety young trainees residing in Kastamonu with different educational backgrounds ranging from primary school to university. The project aimed to integrate design and creative thinking skills in traditional woodwork training in order to discover and support young talents, revitalise local handicrafts and stimulate entrepreneurship in the region.

At the end of the course, sixty-three trainees completed the programme with at least two original design works. Thirty of them were selected to carry out further practice in Kastamonu craft industry. The trainees were paid on a daily basis, which was an important motivation for them to attend the course. Within a six month programme, two days were allocated each week to the design training module whereas remaining three days were devoted to woodworking. The woodworking module was conducted by local wood masters, whereas design training module was carried out by staff members of Industrial Design Department at Middle East Technical University (METU ID). The courses were carried out in the workshops of Kastamonu Handicrafts Training Centre. The program consisted of workshop practices, seminars, field trips and product development activities.

Action research principles were employed in determining the content and approach of the design training module. The content and approach were reshaped throughout the programme by reflecting upon previous experience. During the first three months of the project, the trainees were given introductory lectures and exercises about basic design principles, technical drawing and sketching. This approach of introducing universal knowledge of design education was not well received by the trainees, especially when they were asked to be creative. The following three months were more productive in terms of creativity after employing new strategies.

The training program involved field trips to small workshops in Kastamonu where woodworking is practiced. In these workshops, mainly functional and decorative objects and furniture are produced. Wooden objects are usually decorated by techniques such as carving, jigsaw cutting and burning. Masters teach these techniques to apprentices. Apprentices apply the decorative pattern by measuring it on the actual object, drawing it on the raw material and carve, cut or burn to replicate the master's work. This method does not allow to draft a new design and try it on wood, which is a precious and hard to work material. In the woodworking module of the training programme, local wood-masters' approach was based on this traditional method, by which they gave tasks to the trainees to practice carving, cutting and burning techniques while replicating existing craft products. The paper explains the strategies employed by design tutors throughout the programme to foster creativity of the trainees and makes recommendations for the conduct of similar studies by presenting the trainees' responses to the questionnaires conducted at the end of the process.

Improving visualisation and abstraction skills

In order to enable the trainees practice idea generation and concept development, their visualisation, sketching and modelling skills needed to be developed, as the first step of design training. For this purpose, the trainees were given life drawing and figure drawing from memory exercises. These exercises demonstrated great discrepancy between the visualisation skill levels of the trainees, and allowed the design tutors to understand the strengths and weaknesses of the trainees and guide them accordingly. In the following step, the trainees were introduced to classical drawing instruments such as T-square and rulers, and were given technical drawing courses at beginner level.

These courses aimed to develop the trainees' 3D visualisation skills via drawing orthographic, isometric and perspective views of objects. After two months, considerable improvement was observed in the trainees' visual expression skills and sketching out their ideas.

Besides drawing lectures and exercises, in order to enable the trainees discover the principles lying behind the traditional forms and think beyond them to generate new ideas, basic design lectures and exercises were given. For this purpose, design elements such as line, shape, form and colour and design principles such as balance, contrast, unity and rhythm were explained. As the first basic design exercise, the trainees were asked to study 'rhythm' and 'balance' on black paper with white geometric shapes. Next, they studied 'unity' with coloured geometric shapes on white paper. In order to enable the trainees to understand the geometric configuration behind a traditional pattern, they were taught how to make geometric analysis and were asked to analyse an existing pattern and draw it by using technical drawing principles.

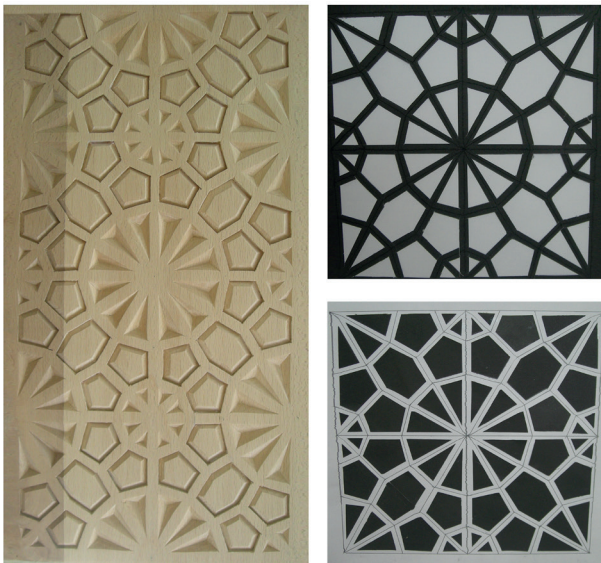


Figure 1 – Analysis and drawing of a pattern carved on a tray, Fatma Hacıoğlu, Senel Bakırcı

At the end of the second month of the programme, as an introduction to idea generation, the trainees were asked to create original patterns. Their initial trials were the representations of the first image that came to their minds, ending up with naive and cliché ones such as hearts by girls, crescent-star –the symbol of Turkish flag- by boys. After observing this, they were asked to draw patterns, that do not look like anything else. After several trial and discussion sessions, majority of the students were able to create novel patterns. Some students were observed to be especially talented in imagining and drawing abstract patterns. These students were encouraged to practice more on pattern design at the later stages of the programme. Some successful examples were later applied on trainees' own designs.

Identifying users' needs

One of the primary aims of the project was to bring economic value to the region by developing souvenir items and gift products as well as functional products which can have sales potential. For this purpose, at the beginning of the third month, the trainees were asked to form groups and bring product proposals which represent the characteristics of the region or the country. After the presentation of first round proposals, similar to pattern creation exercise, it was observed that the trainees had difficulty in bringing novel ideas. Most of them were influenced by existing traditional products. The same groups were also asked to bring functional object proposals such as spice rack, knife holder, dowry chest, jewel box, lamp shade etc. and to develop ideas for these objects. In order to encourage them to create new ideas without being influenced from the existing examples, they were asked to question the basic functions of these objects, to focus on their usage scenarios and to think about the problems encountered during usage and propose solutions accordingly. Strategies developed by the groups to respond to this problem were as follows:

1. To combine two different functions: e.g. integrating bread cutting board to knife holder; integrating napkin holder to spice rack.
2. To propose a solution to a problem that is observed during the usage process: e.g. designing special handles for spice boxes, in order to prevent staining the body with dirty hands during cooking (Figure 2).
3. To use analogies to embed meaning to a product: e.g. to symbolise a female figure on a jewel box; and fork and knife figures on a cutlery holder.

At the form creation and detailing process of these products, critique sessions were held during which design tutors advised and guided the trainees by discussing their sketches. They were encouraged to apply their previously designed patterns on the products. Since the trainees made two months progress on woodworking module, they applied their finalised designs by cutting, carving or burning wood. Wood-masters helped the trainees during this process. On the other hand, it was observed that applying the design on the actual material without experimenting it on a model did not allow idea development and refinement on the 3D form. Therefore quick modelling techniques needed to be taught to the trainees.



Figure 2 – Left: knife holder with a bread cutting board, Serpil Sarioglu, Ümit Sarioglu, Dilek Macakoglu, right: spice rack with napkin holder, Senel Bakırcı, Fatma Hacıoglu, Sema Akça, Hamide Acar, Züleyha Çakır, Suat Ramazan Demir

Quick modelling exercises with the guidance of design students

After three months, Kastamonu trainees and METU ID first year students who were carrying out their summer practice in faculty workshops were brought together. A form creation workshop was conducted jointly. During this workshop the trainees were introduced to polystyrene foam as a quick modelling material which is much easier to work with comparing to wood. Groups consisting of one METU ID student and two trainees were formed. Industrial design students who made this exercise before guided the trainees in form development. They showed how to process foam by using thermo-cutter, hand-held rotary tools and hand tools. Experiencing quick 3D modelling in such a practical way was also a surprise for wood masters.



Figure 3 – Form development workshop conducted with trainees and METU ID students

Getting to know the region

The project also aimed exhibiting the resulting craftwork and getting feedback from local people. In the fifth and sixth months of the project, field trips were organised to certain districts in Kastamonu such as Cide, Inebolu, Tosya and Daday, and products were developed characterising these districts. The outcomes of the studies were exhibited in these districts and in Kastamonu. These stages of the programme were coordinated by design tutors and wood-masters collectively.

The first field trip was organised to Cide, a coastal town, known for its shipyards. The trainees were able to observe boat and yacht production processes in the major shipyards of the district. As part of the souvenir items exercise, two groups were assigned to make model-boats. For this purpose, design tutors introduced a new technique of shaping the wood, which was not used in the region. Similar to actual production, the hull of the boat was formed by laminating wood veneer. The outcomes of souvenir items and functional products assignments together with model-boats were exhibited at a central area in Cide on a weekend. Opinions of the visitors were collected by a questionnaire. The results of the questionnaire showed that the visitors perceived the exhibited products as souvenir objects displayed for sale. On the other hand, exhibited works, did not qualify to be finished products with expected originality. There were still similarities with existing products sold in the region. In order to encourage the trainees to be able to think beyond existing images they are accustomed to, new strategies were developed to introduce abstract thinking.

Deconstructing and reconstructing a form

The second field trip was to Inebolu, which is a town known for its old Turkish houses. The expectation from this phase of the project was to develop new models in order to contribute to the existing model house souvenir business in the region. Making a scaled replica of a house would not encourage the trainees to think beyond existing examples and the results would not reach the expected level of originality. Therefore a different strategy was followed: each trainee was expected to analyse Inebolu houses and was asked to design a puzzle house. The puzzle would consist of wooden building blocks and each puzzle set would allow building more than one type of house. The exercise aimed to enable trainees to deconstruct a form, and to reconstruct it with a new unity. The trainees had difficulty to perform the requirements of the assignment. In order to give them a start, design tutors acted as facilitators and made an example puzzle house from polystyrene foam. Trainees developed modified versions of this example by using foam. Since it was easy to experiment with the foam, majority of them were able to produce different configuration of puzzle houses. Once they decided on the final form, they applied their design on wood. Trainees were encouraged to use different techniques for surface finishing of the puzzles such as painting the blocks, illustrating the window patterns by burning, stencil spraying and by making stickers (Figure 4). Resulting products were exhibited at Inebolu at the end of July. The results of the questionnaire showed that “puzzle Inebolu houses” evoked great attention and a number of visitors wanted to buy them.



Figure 4: Top left: An Inebolu house; top right: trainees stencil spraying; Bottom: Puzzle Inebolu houses: left Nesrin Ömercioğlu, right: Bahadır Tıgılı and Dilek Çolak

Products inspired from a forgotten craft:

The third field trip was to Tosya, where trainees were taken to workshops specialised on door production. The expected outputs of this stage of the project was to develop new products which could contribute to door production in the region. Existing workshops were producing generic door models, which did not represent the characteristics of the region. A design process to develop derivatives of these models would not stimulate creative thinking. Instead, it was decided to analyse a historical way of building doors namely ‘kündekari’ which was mastered in the region and develop new designs inspired from it. Kündekari is a carpentry art mostly used in doors where wooden geometric forms are interlocked without using any glue or nail to form the body. An old kündekari door was found in one of the workshops, however this valuable technique which requires patience was no longer implemented in Tosya. After returning to Kastamonu, examples from different workshops were collected, dismantled and analysed. Geometrical relations between the parts and their locking mechanisms were examined.

The trainees were asked to design new products inspiring from kündekari. Since their last experience was to develop puzzles, most of the students proposed designing new puzzles inspired from the joining principles of kündekari. In this assignment each trainee was guided by design tutors to differentiate their ideas from the class. The strategies followed by the trainees to develop novel ideas were as follows (Figure 5):

1. Using colours to emphasize the parts in kündekari
2. Using different geometric shapes which have potential to form various patterns
3. Using non-geometric figures as parts forming the puzzle
4. Applying wood carving method on the parts of the puzzle
5. Developing wall tiles, formed by interlocking parts and giving pattern to them by burning or carving.

While developing the designs, the trainees first made sketches, and then drawings to define the geometric relations between the parts. Later by cutting the shapes from paper they discovered new reorganisation principles. Finally they implemented their designs by using wood. Resulting products were exhibited in Tosya in mid August.

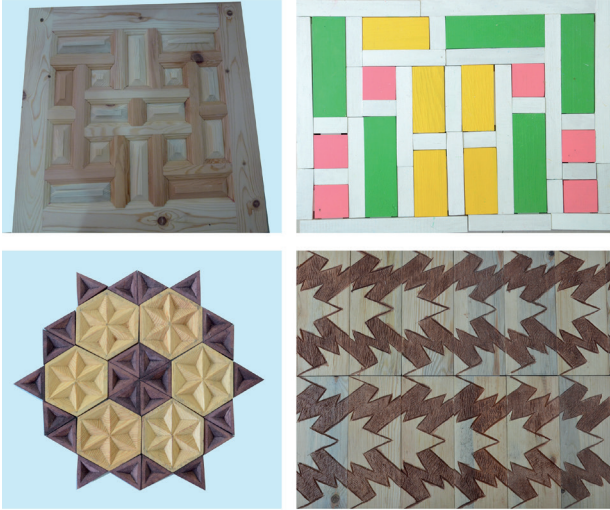


Figure 5 – Top left: Künde-kari door; right: künde-kari puzzle: Nese Özdemir, Sevcan Karamehmetoglu ve Serkan Karasüleymanoglu; geometric puzzle with carving application: Sehriye Kadam; wall tile with a pattern application by burning: Nesrin Ömercioglu

Creating an object with a character

Final field trip was to Daday, a town characterised with its iconic chair. The trainees observed the making process of Daday chairs in a small workshop. The output of this stage of the programme was expected to develop new chair models. However without having relevant ergonomics and design knowledge it would not be possible for the trainees to develop original chair designs. For this reason, in order to develop the trainees' abstraction skills and to play with form in a smaller scale, they were asked to redesign Daday chair in one to ten scale, as a product mascot. Each trainee was expected to design mascot Daday chair by giving it a cute character. The trainees first generated various ideas by sketching, later modelled them by using polystyrene foam. Finally they made their mascot chairs from wood. All trainees who were able to complete the programme were able to respond to this assignment with an original mascot chair. Resulting products were exhibited in Daday at the end of August.



Figure 6 – Top left: Original Daday chair, right: polystyrene foam models, Bottom: Examples from finalised Daday chairs, from left to right: Dilek Macakoglu, Serkan Yılmaz, Nesrin Ömercioglu, Serife Ismailoglu, Erkan Berber

Trainees' opinions about the programme

At the completion of the project, the trainees' opinions were gathered with a questionnaire. Some of the gathered opinions and their percentages were:

- 75 per cent found design courses satisfying
- 19 per cent partially satisfying
- 61 per cent found woodworking courses satisfying
- 51 per cent found length of the course inadequate
- 47 per cent thinks design and drawing courses were the most difficult part
- 55 per cent believe this course will help finding employment
- 70 per cent would like to continue woodworking
- 96 per cent think this course raised their awareness about wood products

Some of the responses they made to the open ended questions were:

"First I thought this course was not suitable for me, but later I felt it increased my thinking ability. I realised the fact that designing and making gives pleasure and happiness to human beings."

"As a person being on the consumer's side now I am very happy to be a maker."

"First I found it very difficult to draw, but later as my teachers encouraged me I realised I can be very good at pattern drawing."

"I started observing my environment in a different way."

"The more I believe I make beautiful things, the more I am motivated to make."

Conclusions

During the coordination of the training programme, since the skill levels of the trainees varied in terms of analysing, idea generation and visualisation, different training strategies needed to be developed throughout the process. Since the making process of woodworking depended on copying existing artefacts, giving design courses parallel to woodworking courses, without enabling necessary interaction between the wood-masters and design tutors was a challenging task. In the second half of the programme, when the courses were coordinated by the design tutors and wood-masters collectively, creation of original ideas and developing mastery on woodworking progressed hand-in-hand. Depending on the experience gained from this programme, suggested strategies in coordinating such a program are as follows:

1. Discover the trainees' strengths and weaknesses in creativity and visualisation
2. Encourage them to use techniques in which they are good at
3. Empower them with visualisation and modeling skills
4. Raise their awareness about their local heritage
5. Break their ties with their existing visual memory
6. Guide them in problematising the design task
7. If they are stuck, demonstrate possible solutions, act as a facilitator
8. Find the potential in their ideas and guide them to find their own way to solutions
9. Exhibit and publicise the solutions, raise their motivation, let them communicate their ideas with local people

Since the project brought two different creative cultures together, the process was fruitful for the stakeholders of both sides in terms of learning terminology, techniques, methods, approaches and practices from each other. This type of a project has a potential to be applied in different regions and in different craft industries.

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