KNOWLEDGE SHARING BETWEEN DESIGNERS AND CRAFTSPEOPLE IN TURKEY: DEVELOPMENT OF A PLATFORM*

Türkiye'de Tasarımcılar ve Zanaatkârlar Arasında Bilgi Paylaşımı: Bir Platformun Gelişimi

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ABSTRACT

In this study an online learning resource was developed to support new and contemporary production of craftspeople both to expand craft for daily use and to enlarge their marketing opportunities. The study started with the aim of creating a bridge between formal design knowledge and craft knowledge. First, two learning modules were developed based on desk research, field visits and interviews with master craftsmen. These modules were proposed as learning material rather than educational instructions. Hence, craftspeople can use the resource for motivation to think out of traditional boundaries. While preparing the learning resource a cyclical procedure was followed. The researchers first visited a goldsmith *(sadekar)* and a leatherwork master *(saraç)* to get an understanding about the resources they use to make new products. Following this, initial content of modules were discussed. A paper prototype was designed with the developed content. Feedback for the prototype was collected from the masters. Based on the feedback from masters and desk research the content was revised. Two more modules were added and proposed product examples were revised and redesigned. The final design was uploaded to www.yenizanaat.net [www.newcraft.net]. To test the resource, a jet stone *(oltu)* master used the website to experiment with jet stone. The products he made were evaluated both by the researchers and an external examiner to gain an understanding of the content's effect. Significant experimentation and differentiation was seen in the final work of the master.

Keywords
Design, craft, learning, field work, Turkey.

ÖZ

Bu çalışmada yeni ve çağdaş ürünler tasarlamak isteyen zanaatkarları tasarım bilgisi ile desteklemek için çevrimiçi bir öğrenme kaynağı geliştirilmiştir. Çalışma tasarım bilgisi ile zanaat bilgisi arasında bir köprü oluşturma amacıyla başlamıştır. Çalışmanın amacı uzun vadede hem zanaatin günlük kullanımını yaygınlaştırmak hem de pazarlama fırsatlarını genişletmektir. Öğrenme kaynağı, zanaatkarlar tarafından kullanılabilecek çağdaş tasarım bilgisi içeren bilgi birimleri ve ürün örneklerinden oluşmaktadır. Bu birimler eğitim talimatları yerine öğrenme malzemesi olarak önerilmiştir. Böylece, geleneksel biçimler dışında düşünmek isteyen zanaatkarlar gereksinim duyduklarında öğrenme kaynağını motivasyon bulma amacıyla kullanabilmektedirler. Öğrenme kaynağını hazırlarken ustaların görüşleri birden fazla kere alınıp öğrenme kaynağına yansıtılarak döngüsel bir süreç izlenmiştir. Araştırmanın birinci aşamasında, araştırmacılar deneyimli bir sadekar ve saraç ile görüşerek yeni ürün tasarlarken ustaların esinlendikleri kaynaklar hakkında anlayış geliştirmişlerdir. Bu adımın sonucunda hazırlanacak olan birimlerin içeriklerinin olasılıkları belirlenmiş ve bu liste literatür ile karşılaştırılarak iki öğrenme birimi taslağı geliştirilmiştir. Geliştirilen taslak içerik ile bir kağıt prototip tasarlanmıştır. Ustalar ile tekrar görüşülerek geliştirilen kağıt prototip hakkında geribildirim alınmıştır. Ustalardan alınan geribildirime ve devam eden literatür araştırmasına dayanarak modüllerin içerikleri tekrar ele alınmıştır. Yeniden değerlendirme aşamasında, kağıt prototipe iki birim daha

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eklenmiştir. Birimlerde önerilen ürün örnekleri gözden geçirilerek yeniden tasarlanmıştır. Son hali verilen birimler ve tasarımlar www.yenizanaat.net adresine yüklenmiştir. Geliştirilen dijital öğrenme kaynağını test etmek için deneyimli bir oltu taşı ustası öğrenme kaynağındaki birimleri inceleyerek oltu taşı ile ürün denemeleri yapmıştır. Öğrenme kaynağı içeriğinin ürünler üzerindeki etkileri hakkında bir anlayış geliştirmek için yapılan ürünler, araştırmacılar ve bir dış değerlendirmeci tarafından incelenmiştir. Son ürünlerde dikkate değer oranda deneysellik ve farklılaşma görülmüştür.

Anahtar Kelimeler
Tasarım, zanaat, öğrenme, saha çalışması, Türkiye.

Introduction

It has been widely stated that craft skills and production are decreasing in several different parts of the world (Mehta 1996, Noel et al. 2011). As a way to sustain these practices and knowledge, support projects with various strategies by craft and design councils, higher education institutions and corporate bodies have been established. On the other hand, digital technologies provide room for craft to be sustained, transformed and re-interpreted. Craft practices are forming a new craft-based economy with the use of technology such as 3d printing, e-commerce and entrepreneurship skills (Luckman 2015, Jakob 2013). Taking into the amount of persisting traditional craft practices in Turkey, there is an opportunity for the practitioners to transform and readopt their skills according to the changing needs and demands of the production and consumption culture. These have previously been considered as a potential for folklore by Özdemir (2012, 2018). Having acknowledged this as an asset towards preserving knowledge and practice diversity; building exchange bridges between designers and craftspeople has been the aim of this study. An online learning resource with contemporary design knowledge was developed for practitioners' use and tested with craftspeople.

Craft and design reconsidered in the light of globalization

Craft has a distinct character in its relationship to tradition. According to Metcalf (2007) craft always examines and builds upon past knowledge including examining pre-industrial techniques and material culture, and hence its knowledge is continuous. By this feature, craft practice and objects can still negotiate adoption of modernist aesthetics unlike art and design (Metcalf 2007).

These unique features lie at the foundation of efforts to build knowledge bridges between craft and design in the past. The Arts and Crafts Movement was based on the idea that, the qualities of craft could serve for social betterment and hence it was seen as a central element of design as mechanical production grew. Later, in 1852 architect Gottfried Semper and afterwards architect Hermann Muthesius indicated the necessity of craft to be reconsidered in the light of new technologies of production at the foundation of Deutsche Werkbund in 1907 (Alfoldy 2007). In the founding curriculum of the Bauhaus, with a strong emphasis on the co-existence of design, craft and technology, studios were co-held by a designer, a craftsman and a technician. Interfaces between technology and craft, both regarded as agents to reach utopian social ideals were sought.

Today links between design and craft meet in craft entrepreneurship. A new market for crafts practitioners emerged in creative industries with the impact of digital production, technological advances such as rapid expansion of the use of social media and e-marketing.

World International Property Organization (WIPO) has focused on protecting the know-how of local knowledge including crafts, a component of creative industries today. In the Turkish context, where traditional knowledge is rich and has significant potential to be valorized with dissemination through technological and industrial means Özdemir (2018) argues that the use of traditional knowledge in economical and industrial applications requires interdisciplinary work (Özdemir 2018).

Adding Value Crafts in Turkey

In Turkey, crafts during the Ottoman Empire has been part of everyday life as a provider of daily artefacts. Özdemir (2018) states that while the idea of preserving tradition by transferring knowledge and experience from the previous generation to the next generation is prevalent, yet contrary to popular belief, tradition represents a dynamic structure that exists with continuous improvement in itself (Özdemir 2018). Hence, this research aims to contribute to the changing craft with formal design knowledge. Research indicates documentation of massive variety and forms of production in Anatolian cities such as shoemaking, saddlery, carpet weaving, stone carving and metalsmithing practiced individually or collectively. As a result of sociological and economical changes in the society in Turkey, mostly due to industrialization and immigration to big cities, craft practices and their products have been substantially effected. Crafts products were unable to compete with the product variety and cost efficiency of global mass produced products offered in the Turkish market (Altintas 2016). Difficulty in adapting to urban life combined with the continuing practice resulted in a forced transformation of crafts and consequent degeneration of traditional craft objects (Öztürk 2005). Other research indicated that lack of education and poor interpretations of tradition also resulted in degenerated objects (Kahveci 1998). Employment opportunities in industry decreased employment in the craft sectors. Researchers alarm the decline and extinction of craft practices in Turkey (Altintas 2016, Öztürk 2005, Mercin, 2008)

Despite irreplaceable and rapid loss of crafts tradition, crafts scene in Turkey has a peculiar potential of development since traditional craft practices, although diminished or transformed, are still practiced in the country. As mentioned above, technology and globalization opened a new platform for crafts to be revived in the world such as practices of crafts entrepreneurship with the help of digital production, e-marketing and other new marketing opportunities. On the other hand, crafts production has contributed in economic development for touristic consumption and branding of cities as part of creative industries framework. Turkish crafts transformed accordingly. For example, although saddlery in *Maraş* disappeared because cars replaced animals in transportation, the embroidery made

on saddlery transformed as a result of being exported to Europe and continued to be practiced as a domestic practice by women (Günay 2010). Similarly *yemenicilik* (traditional shoe making) survived by finding a marketing outlet as a touristic object with an export ratio of 90% of the entire production to the US; as well as being used as film props for Hollywood (Günay 2010). Past research indicates recent collaborations between designers and craftspeople in Istanbul in contemporary craft-based design practices (Kaya et al. 2011).

Table 1 shows an analysis of the existing literature on the problems and suggestions of crafts in Turkey. After identifying problems, suggestions and opportunities from the literature, those that can be addressed by the design field have been sorted.

Problems that new products can contribute in their solution	**Suggestions on the need of new products**	**Opportunities for marketing outlets of new products**
Being focused on technical education and lack of new product development courses, lack of training on cultural resources (Kahveci 1998).	New patterns and forms loyal to authentic resources should be developed (Kahveci 1998, Öztürk 2005).	Transformation in crafts practices for touristic consumption were identified (Etikan et al. 2011, Uslu et al. 2006).
The resource aims at assisting new product development.	**The resource aims at product differentiation through experimentation. The practitioners are encouraged to use their existing knowledge and re-interpret it with the assistance of the resource.**	**The products made through the resource may find a marketing outlet with touristic marketing.**
Copying and imitiation (Kahveci 1998, Öter 2010, Öztürk 2005)	Design should be part of education to design and produce contemporary industrial products to avoid redundancy (Kahveci 1998).	Touristic consumption creates a market for crafts (Öter 2010, Bayazit 2012, Oğuz 2002).
The resource aims at product differentiation through experimentation. Providing new designs is avoided. Self-directed new product development is encouraged.	**The resource aims at product differentiation through experimentation. Providing new designs is avoided. Self-directed new product development is encouraged.**	**The products made through the resource may find a marketing outlet with touristic marketing.**
Not being able to benefit from the advantages of industrialization without degeneration (Öztürk 2005).	Hand crafts should be documented, re-interpreted and commercialized (Kahveci 1998).	
The resource contains examples that are appropriate for partial involvement of mass production.	**The resource aims at product differentiation through experimentation. The practitioners are encouraged to use their existing knowledge and re-interpret it with the assistance of the resource.**	
The products made in hand crafts education courses for employment especially for disadvantaged groups do not reach people or tourists as a commercial and cultural commodity (Oguz 2002).		

The resource may assist improvement of the practice group of disadvantaged groups who attend to hands crafts courses.	Hand craft products should be produced to be used, other than being museum pieces (Oguz 2002).
Recently, the use of culture has been mostly due to economic concerns rather than its preservation and survival (Özdemir 2018).	**The examples in the resource aim at transformation of existing knowledge combined with design knowledge. The examples contain functional applied product examples.**
The source aims to reduce copy production and it is thought that design will increase the variety and added value in the same direction.	New patterns and forms loyal to authentic resources should be developed (Kahveci 1998, Öztürk 2005).
Traditional products (food, dance, music, clothing, handicrafts, festivals, festivals and celebrations etc.) are utilized as means to create added value in tourism sector. However, such uses cause problems such as de-contextualization, humoring, romanticizing, fossilization and commodification (Özdemir 2012).	**The resource aims at product differentiation through experimentation. The practitioners are encouraged to use their existing knowledge and re-interpret it with the assistance of the resource.**
Producers with commercial concerns may change the traditional products without control as mentioned above. As a result of these changes, inconsistencies may occur in traditional products. The source is controlled by expert designers, academics and consumers in the context of its online inspection mechanism. As a result of these audits, traditional production is maintained and innovative approaches are added to the products.	In Turkey, the creation and enactment of a special model for the protection of the rights of traditional knowledge and experience memory will be rational (Özdemir 2018).
	When the source is open to public, it can lead to an increase in the number of the users and contribute to the recognition and protection of the traditional production in Turkey.

Table 1. A summary of outcomes from the literature used in this study. Problems, suggestions and opportunities from the literature, those that can be addressed by the design field have been sorted and marked in bold letters.

Certain problems and suggestions summarized in Table 1 can be addressed by design-driven innovation. In Table 1, outcomes of this literature survey to be used in this research were stated at the end of each column. For example, product differentiation, branding, packaging and e-marketing were recommended for the new crafts sector not only to become viable contemporary commodities but also to gain competitive advantage in the market. In this framework, product design knowledge is proposed as a resource.

The crafts addressed within the field of this research need clarification since scholars point at the confusion between a wide array of hand-made practices such as “art”, “craft”, “hand craft”, “Traditional Turkish hand crafts”, “rural crafts”, “home crafts”, “minor arts” (Oguz 2002, Öztürk 2005) There are three distinct features characterizing craft and their practitioners in the context of this research. These are (1) making objects by hand, (2) being material specific and (3) producing functional objects for everyday use.

In addition to this, the craftspeople addressed in this study are senior masters in their field with extensive experience. Therefore, the knowledge exchange is an expert-expert situation and differs from online professional education of novices (Wood 2006). The masters, as experts of their field are already equipped with abilities to shape materials, solve design problems, use tools and build peer relationships (Lang 2014). They have initial motivation to use new resources for professional development.

In previous research in Turkey, innovation and conceptualization has been observed in the hand crafts practitioners’ practices with the assistance of a designer working in the field with them (Kaya 2015) In another study by Kaya et al. (2013) a situated knowledge sharing platform was established, when a collective of women preparing homemade food worked with designers in the field for packaging development.

Conceptualized in Figure 1, with the emergence and wide embrace of digital technologies the mentioned exchange between designers and craftspeople can be constructed for access of more practitioners in different locations.

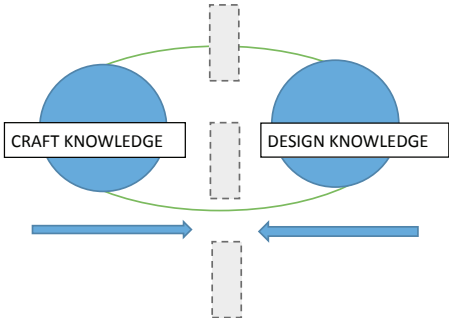

Figure 1. The web-based learning resource as an intermediary between design knowledge and craft knowledge can be composed of several content modules.

Methods

The method of the research is a 16-month extensive qualitative field work conducted iteratively with a mix of action research, desk research, feedback from senior master craftsmen and evaluation of products. First, the relevance and validity of a new platform was investigated by initial meetings with a master metalsmith and a leatherworking master in Istanbul. These meetings were held as unstructured interviews to introduce the research idea, to build rapport and to discuss the necessity of the research on the field. Since particular expert knowledge was required, participant selection for data gathering and testing were non-random and handpicked (O’Leary 2004) The selected craftsmen as experienced and distinguished representatives of a profession can be considered as key informants. The criteria for selecting these masters were having extensive experience in their field of practice and openness to applying new concepts in their work. The interviews with the metalsmithing master (Master M) took place in his studio in Sultanahmet which is a historical cluster of metalsmithing studios in Istanbul. He could easily demonstrate new ideas with his materials and tools.

The interview with the leatherworking master (Master L) was conducted in the meeting venue of a professional association which both recommended Master L for this research and facilitated the meeting. During meetings, the researchers recorded the experiences by writing and drawing.

Subsequently, desk research was conducted to elicit the subject matter of the modules of the new platform. Examples of the use of the selected principles of design were illustrated by the researchers in each module. These were printed into a paper booklet forming a paper prototype. Ideas of the two master craftsmen were consulted to discuss examples' clarity. The content was uploaded to www.yenizanaat.net.

The learning resource was introduced to a jet stone master in Erzurum (Master E) who made traditional products. First the project was explained. Afterwards, the working principles of the learning resource was explained. Taking off from the resource Master E made contemporary jet stone products. The images of these products were assessed by the researchers and an external examiner who had experience both in design and craft. In this assessment the contemporary products were compared with traditional products to discuss the effect of the learning resources' content.

Development of Modules

The resource contains four modules. The aim of the modules in the resource do not have a teaching aim but a facilitation aim to propose design knowledge for product differentiation if the masters wanted to. Hence a way of mind-opening approach was intended rather that a series of step by step "how to do" protocols. In other words, via the learning platform, craftsmen could develop certain design skills accumulated with their existing professional experience to guide towards "how to catch the fish" rather than giving it for once and all.

Here two of the modules "Nature Inspiration Module" (NIM) and "Texture Inspiration Module" (TIM) are explained as examples. Nature was the first concept of the learning module since nature might have been considered as a rich database, with all the structural and formal relationships among its every bit of species belonging to distinctive fauna and flora.

For NIM, nature was considered as a big database for generating new design ideas where the key point was not just to emulate its features as structures and forms but also to interpret the inner relations between the "time-tested patterns". As Sachs (2007) mentioned, "The forms, structures and regulatory principles of nature are not only the greatest source of inspiration for design concepts and processes, but can also be expressed in a wide range of forms and functions."

Biomimicry can be considered as a key concept at this point. As it is explained at Biomimicry Institute's official webpage; "Biomimicry is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies. The goal is to create products, processes, and policies—new ways of living—that are well-adapted to life on earth over the long haul." In other words, "the biomimicry approach is a practical framework that allows the designer to evaluate problems by asking nature to model, measure and mentor and then mimics form, process and ecosystems at all levels of design to find solutions to complex problems" (Rossin 2010).

Abstraction was evaluated as a key issue for such an approach since it means to "draw away, separate, remove or summarize; so that what re-

mains is the essence of the original" (Olver 2002). It might be considered as a useful design tool since during the design development process, involving abstraction in the workflow reduces "peripheral information and enables the design to become more focused" (Olver 2002). Abstraction is a way for the designer (in our case the craftsperson) "to make a comment on what s/he finds most interesting about an object" (Olver 2002). For example, if a fish is to be the inspiration for a design object, the obvious design could be to make a replica in the form of the fish. However, having a subtler and personal design statement would require a set of mind thinking laterally rather than literary.

Figure 2: Abstraction (Repetition of the module) and Structural Transformation (Hierarchy as a key concept)

While building up the modules, the focus was on the core interpretations of natural structures rather than the direct denotations in the form of identical replicas. Transformation is another key concept, by which rather than imitating forms and structures, the craftspeople will experience natural forms and structures in the form-function realm, by converting them into new design suggestions. In the form-function unity, the source of natural inspiration is not only a formal appearing, but it will also contain the clues for building up the functions of strength, permeability, modularity throughout the structural constitution.

The secondly generated module is TIM that is built upon the concept of texture. As Olver (2002) puts it, the term texture might be associated with the sense of touch alone however it is usually a visual experience as well.

Texture is a design element that is related to the surface and perceived through tactile senses. The textures are perceived through our sense of touch and visual sensory organs. The sense of touch aids us in knowing about the pre-existing things in the environment. We usually perceive texture through our sense of touch. However, after becoming familiar with the texture by touching, the texture is felt through our eyes. There are two kinds of texture. Tactile (physical) textures relate to the surface illusions of trees, water, glass, clouds, fabrics and the like. The visual texture is the illusion of the tactile texture created by the materials used. While the tactile textures are three-dimensional, the visual ones are two-dimensional (Öztuna 2007).

In addition to the classification of textures as tactile and visual, we can also classify them under the titles of natural and artificial textures on structural basis. On one hand, for natural texture, there is a strong connection between the outer structure and the inner structure. On the other hand, for artificial textures we can talk about modules, which yield up to a certain pattern in mathematical order and organization.

When working with an online

learning source it is highly important to get the notion of the visual texture, so underlying the structure that consists of the texture itself might be used as generative archetype for developing new approaches depending on different media.

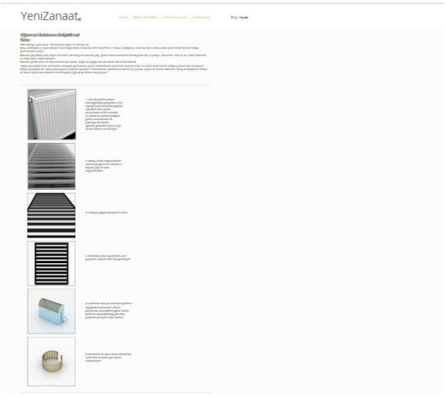

Figure 3: Pattern Generation Out of Texture

In Figure 3 shown above, the steps for transferring the structural data of a certain texture of a heater grill is seen. By the help of the grill's perspective view snapshot, we can talk about a visual / artificial texture that is formed out of negative and positive spaces. When we transform that texture to 2D by drawing, it is easier to see the relationship between negative and positive areas on behalf of forming a certain pattern. From that point on, it is easier to apply this certain pattern to different design ideas as seen in the figure.

Use and Evaluation of the Platform

The test of the learning resource was conducted with a jet stone master in Erzurum who has extensive experience in making traditional products. Jet stone, combined with silver and brass is traditionally used to make prayer beads and jewelry as seen is Figure 4.

Figure 4. Traditional pendants and brooches made by the Master E from jet stone and brass in Erzurum.

Three meetings were made by one of the authors with Master E. In the first meeting the learning resource was introduced. In the second meeting a debriefing was made as requested by Master E. In the third meeting the discussion on the final products and the learning resource was planned. It was made clear in the first meeting that the Master will receive no instructions or interpretations from the authors, also the developers of the learning resource. As much time Master E demanded to make new products was provided as well. Master E used 3 months to examine the resource and make 5 new products based on it. In the third meeting he reported that he used the first two modules which are NIM and TIM because the other two modules, "Scale and Ratio" and "Geometric Production" were not suitable to use for his production technique. He reported that he did not use abstraction for NIM but he used forms from nature as they are. Instead, he used abstraction while he used information provided in the TIM module. He developed new ideas by abstracting textures, also reported by the expert evaluator.

Figure 5. Taking off from the learning resource, contemporary products made by Master E.

According to the expert evaluation, the skills used in traditional products were transformed into new and novel products with the use of the learning resource. The frame made from metal was not used to frame a piece of a stone but it was used to shape the stone into a product. In addition to this, while shaping the stone itself shiny and textured surfaces were used together to define form instead of covering the surface of a piece of stone with decorated metal.

There were four aims to test for the learning resource. These were (1) The comprehension of the learning resource by a variety of people with different backgrounds (2) Providing sufficient product design examples in the modules (3) Inspiring new product design concepts with modules (4) Designing and making novel products. The feedback of Master E on the use of the resource and the feedback of the expert evaluation of the final products indicated that the resource was comprehensible but the language could be simplified. The examples in the modules were inspiring but more examples could introduce more ideas. The products were found highly novel by the expert evaluation. In addition to this, the field observation indicated that these products were unusually new both conceptually and technically when compared to the jet stone products in and around Erzurum.

Findings and Discussion

The study indicated that presenting formal design knowledge to craftspeople can motivate them to make new and differentiated products. In addition to this, the resource can be used by craftspeople in several different locations.

The learning resource can be considered as a tool of inspiration and assistance for any craft practitioner not limited to the genre of their expertise and geographical location. Therefore, the modules in the resource are inclusive by not being designed for a specific craft. They provide access to information and examples that can initiate experimentation. The acquisition of knowledge and its interpretation and reflection on work is left to the needs, capabilities and motivation of its users. In this regard, the function of the resource is assisting transformative learning led by the individuals themselves.

The project was not free from pitfalls which were either overcome by revising certain decisions. The masters who were invited to the project in Istanbul were reluctant to contribute in the project because they did not have time to invest in this project without solid economical return. Some masters invited to the project in Erzurum were reluctant because they thought it would not be easy to adopt to the project.

This study can be expanded in the future by presenting the resource to craftspeople working with different materials. Also, the resource can

be disseminated through professional organizations in Turkey and in other countries, if a multi-language version is developed. In addition to this, the resource can contain a new module where users can upload their designs and receive feedback both from each other and from other designers. As reported by Master E, more modules and product design examples could be useful. Simplifying the language was also suggested.

Finally, the authors emphasize that without the traditional knowledge of the craftspeople the mentioned transformation in new products could not be possible. Therefore, it should not be misunderstood that new products are more valuable and better than traditional products. They are considered as channels for tradition to reach contemporary markets in this study.

ENDNOTES

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