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博士学位論文

地方工芸を活用した製品を開発する研究
—台湾竹工を例に

Research of Product Development for Utilizing Local Craft
—A Case Study of Taiwan Bamboo Craft

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論文要旨

台湾は、竹の一大産地であり、竹が非常に手に入れやすい材料である。竹は繊維方向の引張強度が高く、優れた曲げ強度や硬度を持ち素材は、他の伝統工芸にはほとんど見られず、かつては生活用具を作るうえで欠かせない材質であった。今も現代の洗練された生活と製品にとっても適している。しかしながら竹の形状は筒状であるため、その形状をそのまま創作に応用しない場合、竹を工芸用の材料にするまでにかなりの手間がかかるため、従来の制作方法では労力の面で制約を受けることが多かった。近年労働力不足と賃金の上昇に加え、竹工芸の技法は繁雑で人材の育成や製品の制作に長い時間を要するため、手作り中心の竹工芸品産業は斜陽化が進んだが、天然資源がますます重視される現代、竹の特性と利点が再び注目される。

竹製品は従来の加工方法や形態の影響が大きく、現在市販されているものも従来と大きく変わらない。そのため一般消費者の竹に対する古いイメージは今もなお払拭できないままである。生活様式の変化について、従来の竹の利用法はすでに現代の生活のニーズに合致しないものとなり、それによって竹産業が有していた加工技術も次第に衰退していった。素材の特徴を十分に理解し、現代の生活様式に需要を見出すことが、竹産業を復興することにつながるのである。工芸の美的センスを維持したまま、量産市場のニーズを満たす。これは現在竹工芸の産業化において必ず考慮しなくてはならない課題である。そこでいかにして工芸とデザイン両者をうまく結合させ、竹工芸の特色と産業性を兼ね備える製品を生み出すかが本研究の要点である。

本論文は三部から成る。第一部では、第一章から第三章まで成るが、文献と関係資料を収集し、竹材と竹工芸背景や技法を理解し分析する。第二部で、第四章の地方竹工芸産業の現状や製造工程を調査する。調査から得た資料から、地方竹工芸産業の技法と意匠の創造を明らかにする。第三部で、第五章と第六章から成るが、研究の結果をうけて、研究開発を行った。検討結果に基づいて、コンセプトが生まれ、新しい創造への提案を行いたい。最後に開発新製品は十点組作品を提出した、新製品では制作問題と研究可能性を検討する。

本研究はプロダクト・デザインの観点から工芸の産業化を図る。従来とは異なる竹の応用を試み、現代の生活様式のニーズに応えた商品の開発を試みて、竹製品のイメージを一新させる。現代の加工技術とハイテク機械を応用して手間のかかる製造工程を省き、工芸産業の経済力を高める。竹の長所をいかし、地場産業工芸とデザインの融合を試み、工芸技法を応用して、製品を作り出し、特色づけていく、工芸と製品デザインは相乗効果が生まれる。

Abstract

Taiwan, located on the warm area of Asia, is very suitable for bamboo growth. Therefore, bamboo can be seen everywhere in Taiwan, and is also a quite common natural material that is widely applied for earlier life. Due to bamboo's isotropic fiber distribution, the material has advantages of robust tensile strength and superior flexibility they are not usual found on other natural materials. That's why bamboo is an indispensable material in earlier Taiwan. Such excellent attributes of material, even in modern life, is also suitable and popular for life product applications. However, restricted by its cylindrical (hollow) figure, before bamboo was employed it (bamboo tube) must be processed by a series of procedures that are usually handmade and time-wasting works in early age. Furthermore, processing of bamboo products requires elaborate techniques; training for industrial human resource is a long-term work. For the past few years, traditional bamboo craft industry has been declining gradually as its insufficient technicians and rising salary. Nevertheless, following the trend of eco-conscious, nowadays natural and eco-friendly materials are getting more concern progressively. So does bamboo's attributes and advantages attract peoples' attention again.

With the influences of earlier processing procedures and bamboo's figure, today's bamboo products are not distinctly different from previous handmade products. Therefore general consumers' impression on bamboo remains tradition, same as before. However, nowadays lifestyle and consumers' preferences are obviously distinct from earlier life, traditional bamboo products exist a gap with present life requirements. Such variation causes bamboo products market recessive. Based on the above descriptions, this study will try to activate bamboo craft applications after surveying and analyzing bamboo material characteristics in order to match present lifestyle and peoples' requirements. Apparently, how to make products retain beauty of traditional craft and satisfying modern market requirements is a considerable issue, and had been explored in the study. In addition, how to combine craft and design to create a new product with craft features and market value is the importance for the study.

This paper is divided into three parts. The first part includes literature reviews and information collections, listed in chapters 1, 2, and 3, to grasp bamboo applications and backgrounds of bamboo crafts. The second part shows the surveys of currently local bamboo craft industries, and listed in chapter 4, to realize industrial general situation. These surveys are available for subsequent design proposals of new products. The last, third part, listed in chapters 5 and 6, will bring up several concrete design schemes based on the exploration in the forward chapters. There are ten sets of original products are developed in the step, and they support much of available information for succeeding commercializing discussion. In addition, manufacturing processes of developed products and feasibility estimation are also presented in the conclusive discussion.

The objective of this study is trying to extend applications of traditional bamboo craft. For satisfying modern consumers' life requirements, the study proposes several new

applications that are entirely different from previous bamboo crafts. The design works in the study try commercializing crafts based on modern product design standpoint. One of the practical approaches is to adopt modern processing on some processes to simplify handmade procedures, so that to boost the competitiveness of craft industries. Based on bamboo's advantages and specific attributes, this study combines local craft and modern design and presents an original design scheme that employs craft technique on product to improve product features and shows the effectiveness of combining traditional craft and modern design.