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Wajima Project Report

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On January 19, 2018, three student groups gave mid-term presentations on the *Wajima nuri* industry revitalization plan using a *kansei* (sensitivity) engineering approach. This paper provides an overview of the lectures and exercises that the author of this report conducted on *kansei* engineering in AY2016 as well as a lecture and assignment proposal in 2017 on a "narratives" creation approach that appeals to the *kansei* of consumers, and it provides a critique of the midterm presentations by the three student groups.

1. Overview of the Course

Kansei engineering is a form of engineering in which the kansei (sensitivity) of the consumers is utilized in product design. However, the objective for the students in the Wajima Project is not to create a product themselves, but instead to deepen their understanding of traditional crafts and enhance their ability to promote them far and wide. Therefore, this course first introduced the general procedures involved in kansei engineering and then directed the students to propose a promotion method for Wajima nuri that would appeal to the kansei of the consumers as a course assignment.

The course and exercises on the *kansei* engineering method were provided through a series of five lectures on "*Kansei* Data Analysis." An overview of the course and the assignments for the students in the Project are introduced below.

#1: *Kansei* Data Analysis (1) Bipolar Evaluation Scales, (May 11, 2016)

[Kansei Data Analysis 1: Bipolar Evaluation Scales, May 11, 2016]

[1] Introduction

- History and the current state of traditional crafts (kogei) in Ishikawa Prefecture
- Technical development at the Ishikawa Prefecture Industrial Research Institute and others
- Revitalization of the kogei industry through local projects
- [2] Overview of *kansei* engineering procedure (1) Method of *kansei* assessment data collection
- [3] Exercise: Development of a *kansei* assessment scale (relief, tender, etc.) for *Wajima nuri* products

#2: Kansei Data Analysis (2) Approach to Design Support (May 18, 2016)

[Kansei Data Analysis 2: Approach to Design Support, May 18, 2016]

- [1] Overview *kansei* engineering procedure (2) Introduction of statistical analysis for assessed data
- [2] Method of development for a feasibility model (a simple model developed by an individual or with few individuals)
- [3] Exercise: Model-based product recommendation aligned with the expectations of consumers with respect to *kansei*

#3: Kansei Data Analysis (3) Product Recommendation (May 25, 2016)

[Kansei Data Analysis 3: Product Recommendation, May 25, 2016]

- [1] Overview of *kansei* engineering procedure (3) Method of product recommendation based on the *kansei* assessment model
- [2] Introduction of recommendation examples using *Kutani yaki*
- [3] Report assignment: Development of a revitalization plan centered around a recommendation method for Wajima nuri products

#4: Kansei Data Analysis (4) Knowledge Management (July 12, 2016)

[Kansei Data Analysis 4: Knowledge Management, July 12, 2016]

- [1] Overview of knowledge management methods
 - Needs and difficulties in knowledge management
 - Kansei marketing that utilizes tacit knowledge
- [2] Reports from the previous session by 3 groups and comments on the reports
- [3] Exercise: Development of *kansei* catchphrases based on the knowledge on *Wajima nuri*

#5: Kansei Data Analysis (5) Kansei Message (May 12, 2017)

[Kansei Data Analysis 5: Kansei Message, May 23, 2017]

- [1] Review of *kansei* engineering and *kansei* marketing
- [2] Approach to the development of a *kansei* message (catchphrase, narratives)
 - Collection of existing messages and method of their assessment
 - Method of kansei message development using the knowledge management method
- [3] Research assignment: *Wajima nuri* industry revitalization plan using the *kansei* engineering approach

2. Study report by student groups

Student groups conducted studies on the research assignment presented in the aforementioned lectures under the guidance of Dr. Matsumura and with the support of many others involved, while the lectures themselves were given by Dr. Toriya. Each group consisted of a mix of both foreign and Japanese students, and they struggled with the "language barrier" in expressing *kansei*; but, every group nonetheless conducted their study with their own unique ideas, and a mid-term report was presented on January 19, 2018.

The following reports an overview of the studies by the 3 groups and comments on the outputs.

Group A: Development of *Wajima nuri* catchphrases using *kansei* words

[Exploring kansei words to develop catchphrases that motivate consumers to purchase Wajima nuri] [Details of the study] Surveys were conducted for a wide range of interviewees, including doctors, Japanese students, foreign students studying abroad in Japan, stakeholders of Wajima nuri, city staff, and businessmen in Tokyo with respect to what they feel about Wajima nuri and what they want from Wajima nuri by preparing many kansei words, such as "warm - cold," between July and December 2017. Several keywords were extracted as a result, such as "smooth" and "gorgeous" with respect to how they feel, and "usable" and "delicious-looking" for what they expect out of the product. Based on their investigative study, the students created catchphrases such as "why not have a beautiful bowl?"

[Comments] Considering that Japanese words and English words do not correspond one-on-one, it was clear that the effort to write a report in English was tough since questions and answers were in the Japanese language for the Japanese interviewees. In spite of this, the students were able to conduct many interviews on the *kansei* assessment and the direction desired for *Wajima nuri* with Japanese people in various occupations, and they collected

valuable data. The students also succeeded in creating several catchphrases that included the desired *kansei* words. These catchphrases need to be reviewed by the stakeholders involved in *Wajima nuri*. On the other hand, developing catchphrases using *kansei* words that most people would not even think of should be considered in order for *Wajima nuri* to gain greater attention. The catchphrases were also created by the *kansei* of the group members themselves, but a future challenge would be to develop a methodology in which even non-members can easily create catchphrases.

Group B: Exploration of catchphrases from the "narratives" of stakeholders for *Wajima nuri*

[Creating catchphrases based on narratives from Wajima nuri artisans and the feelings of elderly people in Kanazawa city]

[Details of the study] Interviews were conducted on the kansei assessment and the "narratives" behind the Wajima nuri at restaurants in Kanazawa and in local communities in Wajima-shi. From kansei assessment data using adjectives, responses by evaluators varied from "practical," "light," and "familiar" for general urushi bowls, but the students found that kansei words scored higher for Wajima nuri, including "relief," "tender," and "noble." This group focused particularly on the opinions of retired people who have a greater potential for purchasing Wajima nuri, and considered new ways to use Wajima nuri, such as in events that celebrate the four seasons, by taking the analyzed kansei assessment data into account. The students also proposed knowledge sharing promotion methods such as an introduction to the manufacturing process for Wajima nuri and how cuisines are served on it.

[Comments] The students took a new approach in developing catchphrases based on "narratives" attached to *Wajima nuri* collected from artisans involved in the *Wajima nuri* industry. However, deep interactions with the artisans are required to collect such usable "narratives," which may have been a challenging process for the foreign

students. It is hoped that sufficient time and research expenses are allocated to provide students with a chance to deepen the interactions and help them gain experience as the missionaries of traditional industries. Since the students proposed the use of *Wajima nuri* in various scenarios, a future challenge for this group of students is to attempt the creation of new catchphrases through which anyone can imagine the use scenario.

Group C: Introduction of the importance of *Wajima nuri* using *kansei* words

[Using Kansei words to introduce the importance of *Wajima nuri*]

[Details of the study] An online survey of 140 women across Japan was conducted targeting housewives from ages 30 to 50 who are passionate about the education of their children. Students obtained responses such as "kogei," "high-end product," and "superior technology" for impressions on Wajima nuri, and "refined," "elegant," and "relief" as appropriate adjectives that describe Wajima nuri. The students also found that approximately 20% of the respondents used Wajima nuri on a daily basis, and 10% of the respondents used Wajima nuri for special occasions such as annual events, hosting guests, or to freshen up the mood. However, with regards to the education of children, which was relevant to the objective of the study, the students revealed that they received responses such as traditional culture, Japan-ness, and nurturing of a spirit that takes good care of things, but negative opinions could not be ignored at the same time, such as too costly, time-consuming maintenance, and no use. In the end, the students assumed a 40-year old housewife as a persona (an important and a symbolic user model) using the value proposition method, which they learned from Dr. Toriya, and searched for an approach to promote Wajima nuri to this persona.

[Comments] The proposal of a promotion method that incorporates a value proposition method is innovative and very interesting. Consistency of the

research would be clearer if a logical explanation could be provided on how the enormous volume of survey data from the first half of the study was used in the promotion method. Additionally, it would be perfect if the students could validate the effect of the proposed promotion method or gain support from stakeholders. If they find that it is indeed significant, they may be able to expand the sales target by setting various personas.

3. Concluding Remarks

The "Cultural Resource Manager Training Program" at Kanazawa University aims to "educate and train talents equipped with the skills required to identify, manage, and develop policies for the global utilization of local cultural resources." Second only to Kyoto Prefecture, Ishikawa Prefecture is a region with a concentration of kogei industry, including the Wajima nuri industry, but its production value has greatly declined compared to its heyday. Revitalizing this industry is important not only for its economic significance, but also crucial in terms of the management and utilization of cultural resources. Student participation in the program through the deep learning of traditional Japanese industries and a serious effort in developing proposals for revitalization would contribute greatly to the success of the program described above.

The Wajima Project led by Dr. Matsumura is an effort to contribute to the achievement of the aims set by the training program through the development of revitalization plans using *kansei* engineering and design thinking. Students who participated deepened their understanding of *Wajima nuri* and greatly enhanced their ability to identify, manage, and develop plans to utilize cultural resources in spite of the constraints set by time and budget. I look forward to the future success of these students.