

A New Methodology of Qualitative Consumer Research

Using Picture Mining for New Product Development

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1. Introduction

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2. The Methodology of picture mining
3. Case Study
4. Conclusion

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Types of picture-using researches

▶ Showing pictures to get responses

Image tests, Product evaluations, Design evaluations etc.

▶ Collecting or gathering pictures

Draw pictures, Bring pictures on interviews, gather pictures from the internet etc.

Objectives of the Report

- Introduce the concept and framework of Picture Mining
- Discuss about the methodology and significance of Picture Mining from past researches
- Introduce a case study of Product Development using Picture Mining Methods

2. The METHODOLOGY OF PICTURE MINING

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- **Definition:**

- **Picture mining is the explorative method that takes useful information from pictures, static or moving images.**

- It is often compared with the methods of text mining.

- The Picture Mining concept includes observational research in the broad sense, because it also aims to analyze moving images

(Ochihara, Edo, Hiroi; 2010).

2.1 Picture Mining Concepts/ Definitions

• Technological Changes

- Low price digital cameras
- High information transmission speed
- Low costs for information transferring
- High performance and resolution of the cameras of mobile phones.

(Ochihara, et al., 2010)

2.2 Picture Mining

Backgrounds(1) Technological Changes

- # Social Changes

- Diffusion of mobile phones with digital cameras
- Downsizing and light-weighting of cameras
 - No more resistances in taking and processing pictures
(Ochihara, et al., 2010)

2.2 Picture Mining Backgrounds(1) Social Changes



2.3 Picture Mining Basic Procedures

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1. **Make picture cards** for each of the photos
2. Record information from the questionnaire on back side
3. Turn the questionnaire side above, **classify, group, sample or abstract characteristics**
4. Turn the picture side above, analyze for findings (repeat steps 3 and 4 for achieving findings from the pictures)
5. Confirm the findings found from step 3 and 4
6. Use other quantitative and/or qualitative methods for confirming findings.

2.3 Picture Mining

2) Procedures

- ▶ Refashion of Clothes (2006)
- ▶ OBENTO for kindergarten (2007)
- ▶ Tools for desserts and cakes (2008)
- ▶ Shoes and Occasions (2007)
- ▶ Fashion difference between Tokyo Disneyland and Disneysea(2009)
- ▶ Satisfaction in Highway Service areas(2010)
- ▶ Cool Biz styles in summertime (2011, 2012, 2013)
- ▶ Relations between Hairstyle and Fashion (2012)
- ▶ Lifestyles for Energy Drinks (2012-2013)
- ▶ Desserts and Cakes for Christmas (2013)
- ▶ Lifestyles for healthcare (2013-2014): in progress etc.

2.4 Recent Picture Mining Researches

Risks of bias in verbal surveys

- 1) Researchers encode the questions to communicate with the respondents
- 2) respondents decode the questions
- 3) respondents encode their answers to the given questions
- 4) researchers decode the answers of the respondents

(Ochihara and Edo;2012)

Validity of Picture Mining

A Non Language-dependent research

- a) Lifestyle analysis
- b) New Product Development
- c) Marketing in Fashion and design

Useful Areas and Activities

3. Case Study

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• Outline of Research(1)Objectives

- 1.To understand the lifestyle of consumers
- 2.To understand potential needs of consumers
- 3.Develop new products

3.1 Lifestyle Analysis and Product Development

▶ Outline of Research(2)Methods

- ▶ Research Period: December 2012 to January 2013
- ▶ Respondents: 9 Female University students
- ▶ Method: Instructed to take and send pictures of a certain topic, such as food, beverages, hobbies, healthcare, dreams etc. every week for 4 weeks with verbal comments.

3.1 Lifestyle Analysis and Product Development

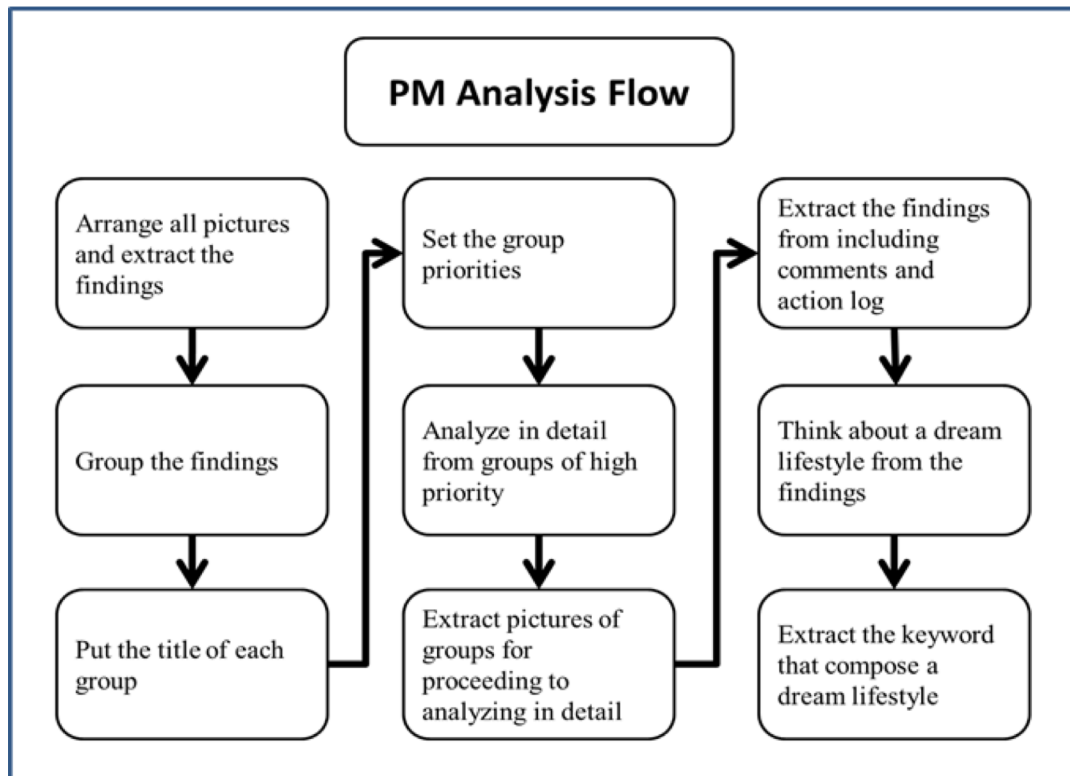
► List of taken Pictures

〈Theme〉	〈Items〉	
"living environment" "life consciousness"	<ul style="list-style-type: none"> • Schedule list • expenditure chart • storage place of drugs and supplements • favorite place at home • something to care about beauty treatment and health 	<ul style="list-style-type: none"> • usual action for beauty treatment and health • meal of a day • sink • etc.
"preference"	<ul style="list-style-type: none"> • favorite things • contents in a bag • something to carry every day • something to addict recently 	<ul style="list-style-type: none"> • places to visit in a day • a relationship chart • etc.
"emotion" ①	<ul style="list-style-type: none"> • something to happy • fun something to beautiful 	<ul style="list-style-type: none"> • cute something to angry • sad something to kind • etc.
"emotion" ②	<ul style="list-style-type: none"> • someone to admire • scene of working hard • something to try 	<ul style="list-style-type: none"> • scene of drinking other company's drink • the coping method when one is tired • etc.

• Outline of Research(3)Methods

- After collecting the pictures, they were instructed to
 - 1)Analyze the their own lifestyles
→They were categorized into two groups
 - 2)Develop concepts for new energy drinks for the other lifestyle group

3.1 Lifestyle Analysis and Product Development



The Steps of Picture Mining