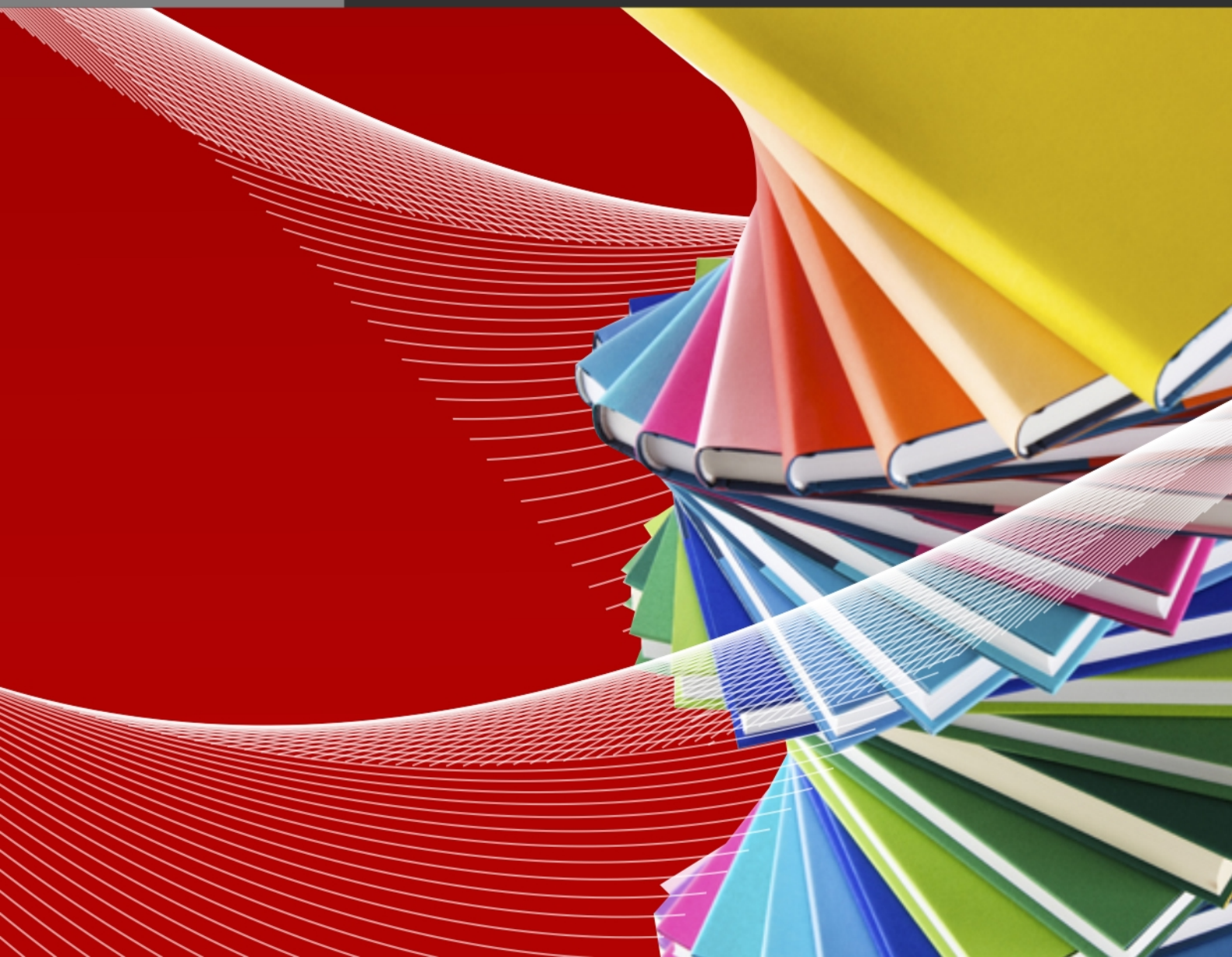
澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU

Outstanding Academic Papers by Students
學生優秀作品



UNIVERYSITY OF MACAU

FACULTY OF BUSINESS ADMINISTRATION

An Experimental Study of Production Information Order Effect on Product Evaluation

Maisie, LAO KIN NGAN

MB042224

Thesis presented to the

Faculty of Business Administration

University of Macau

In partial fulfillment for granting the MBA Degree

2014

Abstract

This study mainly investigates the information order effect on utilitarian products by referring and advancing works of Wilcox, Roggeveen and Grewal (2011) and Biswas, Grewal and Roggeveen (2010). The study tries to find the best order to present the product information (before or after showing the product) in order to earn better evaluation from customers. This study tests both the affective and cognitive product judgment. Furthermore, with two more conditions – first, experience / search advertisement and second, unattractive / normal packaging are also tested. The results show there is assimilation effect occurred when search advertisement is presented before whereby consumers have better cognitive evaluation. When experience advertisement is presented before, contrast effect occurred and affective evaluation is reduced. However, when unattractive packaging is presented before, assimilation effect occurred and cognitive evaluation increased. When normal packaging is presented before, consumers have better evaluation on tested product.

Key Words: information order effect, assimilation effect**,** utilitarian products**,** hedonic products, affective and cognitive product judgment.

1. Introduction

1.1 Research background

Marketers believe that sampling experience can be highly effective for consumer purchase intention. That is why companies are spending over a billion dollars to provide “testing” products to consumers (Wadhwa, Shiv, and Nowlis, 2008). This is especially the case for hedonic products; for example, we can see cosmetic testers at beauty counters, food tasting in supermarkets, etc. For some utilitarian products, on the other hand, such as pens and digital cameras, some shops will also offer product trying before purchasing. However, how could companies present their product information in a better way? Moreover, how and what kind of information could they present in order to get a better evaluation?

Recently, some studies tried to investigate whether product information shown before or after sampling can benefit the product evaluation. And it is interesting to find that, presenting undesirable information after sampling a hedonic product such as chocolate and wine, received better evaluation than presenting before sampling. This is called the assimilation effect. If the desirable information is presented instead, the results will be inversed (Biswas, Grewal and Roggeveen, 2010). The question then arises whether utilitarian product evaluation is influenced by information order as well?

Theoretically, utilitarian products are very different from hedonic products. They are more cognitive in nature, and their judgment should be more based on information content, and if the information has no change, the evaluation should be the same. According to Yeung and Wyer’s work (2004), information content and product picture could elicit emotional reactions from consumers, and such reactions influence the evaluation result on utilitarian product too. It suggests that utilitarian product evaluation might be influenced by certain conditions. As prior framework emphasizes affective quality product evaluation, mainly based on sensory

experience but not on the product information provided, in this current study, we include the cognitive product evaluation in order to ascertain whether the product information order effect occurs.

The study is consisting of 3 experiments with different conditions in order to obtain a more realistic result. The first experiment tests both hedonic and utilitarian products by providing product information before and after showing the product, combined with affective and cognitive evaluation to see whether the information effect occurs in utilitarian products. The second experiment tests experience – sensory evaluation - and search advertisement – including product attributes - instead of text format information. This is to test the change of judgment dimension by consumers, exemplified when people see the picture of a product with an emphasis on cognitive criteria (e.g. material, structure) and emotional criteria (e.g. attractiveness, spokesperson). This raises the question whether consumers will use a different judgment dimension when doing their evaluation. The study tests whether utilitarian products judged by emotional dimension will be influenced by the information order effect, in essence the sequence under which the product information is presented. The third experiment tests two types of packaging products (unattractive / normal) in order to outline two effects. First it is to see whether product appearance will elicit emotional effects and second whether it triggers interaction effect with information order.

1.2 Research gap and expected contribution

First, most of previous studies normally focused on hedonic products in order to investigate the order effect (Biswas, Grewal and Roggeveen, 2010; Biswas, et al., 2009; Wilcox, Roggeveen and Grewal, 2011). This study expands the product type, namely the utilitarian product, which can help companies to better market their products and increase awareness and knowledge.

This in turn could give them more ideas on how to present the product information in their daily sales.

Second, the previous studies pay attention to the likelihood evaluation of the tested product (Biswas, A. Biswas and Chatterjee, 2009; Ge, Häubl, and Elrod, 2012). This study includes the affective and cognitive product evaluation, which can generate more complete ideas to the order effect on utilitarian product.

Third, this study includes two more conditions (search / experience advertisement and unattractive / normal packaging), which were seldom found in previous studies, but found very often in real life. Marketing companies can learn which are the best ways to present their product information and can obtain better evaluation on their products.

2. Literature Review

2.1 Product Information Order Effect

In seeking the product information order effect on the product evaluation, several studies start from the order effect by multiple information presentations. D. Biswas, A. Biswas and Chatterjee (2009) investigate the product judgment by providing consumers with strong and weak cue information. They believe that the final judgment will be highly dependent on short-term memory while there is less distraction. It means, normally people will remember the latest information they get. Some prior research papers introduced the concepts of primary effect and recency effect. These concepts indicate that when multi product information is provided, primary effect will lead the first information to be better recalled, while recency effect will lead to the latest information to be better recalled (Gürhan-Canli, 2003).

Recently, some researchers pointed out that, utilitarian product encounters primary effects because the judgment is strongly influenced by the information provided first. In contrast the hedonic product encounters the recency effect.

Wilcox, Roggeveen and Grewal (2011) introduced the assimilation and contrast effect. The assimilation effect will influence people to evaluate a product better when information is desirable compared to undesirable. Alternatively, the contrast effect will influence people to evaluate more negatively. Experiments were conducted to study the effects of (1) the natures of product information (good or bad) and (2) the information provided on time (before sampling or after sampling) on the product affective quality evaluation for food products. Chocolate from Switzerland and China were supplied for tasting. As the country of origin for food will affect consumer's expectation of product quality, those consumers gave higher marks to Swiss chocolates when informed of the country of origin before tasting. On the other hand, they gave lower marks to Chinese chocolates in contrast. However, if consumers did the tasting before being told the country of origin, the Swiss chocolates received lower marks while Chinese chocolates obtained higher marks. This means that under the assimilation effect, desirable information presented before sampling can make consumers like the product more while it is contrasted when presenting after sampling. Under the contrast effect, desirable information presented after sampling can reduce consumer's favor for the product while it is contrasted when presented before sampling.

2.2 Hedonic and Utilitarian Products

Hedonic products will normally be described as some intangible things like service, music, movie, travel, etc. Although sometimes it can be tangible as well in the case of food, drinks, etc. (Voss, Spangenberg and Grohmann, 2003), the evaluation of hedonic products highly involves

consumer experience and highly depends on the consumers' affective reaction when trying products directly from the experience.

Utilitarian products on the other hand will lead consumers to place more value on product information, and especially to those functional related products, consumers tend to be more cognitive in their evaluation of the products based on the information provided (Biswas, Grewal and Roggeveen, 2010). Although utilitarian products are more related to cognitive evaluation, some studies found that primary order effect occurs when there is strong product information like brand reputation or warranty provided first in the sequence of multi information (D. Biswas, A. Biswas and Chatterjee, 2009). If a utilitarian product search information is presented before trial (e.g. quality, duration, country of origin, etc.) it adds value to the affective evaluation (Micu and Coulter, 2012).

Because of the above, the study predicts the assimilation effect will occur in utilitarian product evaluation and increase the evaluation by providing information beforehand. The contrast effect might occur in hedonic product and this is dependent on the favorability or attractiveness of the product.

H1:

For hedonic products, providing information after presentation will increase the affective evaluation while for utilitarian products, it will decrease the affective evaluation.

H2:

For utilitarian products, the cognitive evaluation will be higher when providing information before presenting the product rather than after.

2.3 Product Judgment Dimensions

Several studies tried to investigate how people judge a product. Especially for hedonic products (Voss, Spangenberg and Grohmann, 2003), those study focuses on the affective evaluation which is defined as the direct feeling consumers get from the experience.

Actually, besides sensory feeling, even for hedonic products, this will lead also cognitive evaluation which is more related to the information provided (Yeung and Wyer, 2004). For example, a beautiful ring is displayed in a shop window: an instant “like” or “dislike” feeling will occur automatically. However, one will still evaluate its quality by learning more information.

Because of the different nature of evaluation, cognitive or affective, it is expected there will be different results under cognitive and affective evaluation interaction because of the information order. Yeung and Wyer (2004) choose sport shoes that contain hedonic and utilitarian attributes in their experiments. They provide either a picture with the shoe structure (utilitarian type of picture) or one with attractive outlook (hedonic type of picture). They found that people who received a utilitarian picture will judge from cognitive consideration without affect influence, while hedonic picture will lead to judge from emotional consideration.

There are two common types of advertisement in the market. They contain search and experience attributes. For advertisement with experience attributes, it is normally describing the feeling of product enjoyment, for example the tagline shows “you will feel great taste when you eat the chocolate”. For advertisement containing search attribute, it will show product information, unobtainable from trial experience, for example the tagline shows “the spectacles filter UV”.

Previous studies indicate that experience attribute adds no value to the evaluation of utilitarian products but are beneficial to the evaluation of hedonic product (Yeung and Wyer, 2004). We

expected emotional advertisement should be similar with an experience attribute, and it should add no value to cognitive evaluation but do benefit the affective evaluation.

H3

For utilitarian products, the affective evaluation will be higher when providing experience advertisement after presenting the product, while it will be the same when providing cognitive information regardless of information order.

H4:

For utilitarian products, the cognitive evaluation will be higher when providing cognitive information before presenting the product, while it will be the same when providing emotional information regardless of information order.

2.4 Product First Impression

Product first impression can be created from product first view or information. When the information is presented first, people will treat that information as their initial evaluation of the product. Therefore, if the product is presented first, an automatic appraisal will be elicited, and people will create a first impression by this experience (Nowlis and Shiv, 2005).

Alternatively, Yeung and Wyer (2004) indicate that product picture and product attitude information could elicit emotional reaction for consumers no matter for hedonic or utilitarian products. In their experiment, participants were induced to be happy or sad by recalling randomly a past experience, then did an affective evaluation after viewing the product picture. They found that people's emotion has a strong positive effect on hedonic product evaluation, but with a slight contrast effect on utilitarian product as well.

This present study assumes that product packaging could elicit emotional reaction automatically at first sight. Therefore, unattractive packaging of products might elicit negative impression of

the product. If it is a utilitarian product, this negative impression will confuse the cognitive evaluation and influence the evaluation by information order.

H5:

For utilitarian products, the affective evaluation will be higher when providing information after presenting a normal packaging, while it will be the same when presenting an unattractive packaging regardless of info order.

H6:

For utilitarian products, the cognitive evaluation will be higher when providing information before presenting an unattractive packaging, while it will be the same when presenting a normal packaging regardless of info order.

3. Experiment 1

3.1 Product selection

The first experiment is to test the information order effect on hedonic and utilitarian products (H1, and H2). It is important to distinguish hedonic and utilitarian products. Based on Voss, Spangenberg and Grohmann (2003), a focus group of 77 white collar employees aged from 25 to 36, who did not participate in the main experiment, were asked to rate four products (movie, magazine, alkaline batteries, sports bottle). They rated five hedonic dimensions and five utilitarian dimensions for each product by using a seven point scale.

The five hedonic dimensions included not fun/fun, dull/exciting, not delightful/delightful, not thrilling/thrilling, and unenjoyable/enjoyable.

The five utilitarian dimensions included ineffective/effective, unhelpful/helpful, not functional/functional, unnecessary/necessary and impractical /practical.

If the rating of hedonic dimensions is larger than utilitarian dimensions, it means the product contains more hedonic attributes. Results showed Movies were found more hedonic oriented (5.97 vs. 3.19), and Alkaline batteries were more utilitarian oriented (2.65 vs. 4.90). In this sense, movies and alkaline batteries were chosen to be stimulus in the experiments.[1]

3.2 Methodology

Design

Participants were 109 white collar employees working in Macau aged from 21 to 40 years (53 were female). The experiment employed a 2 (information order: before vs. after) by 2 (product type: hedonic vs. utilitarian) between-subjects design. Each cell size was around 20 to 27 people randomly assigned. The participants were gathered for a training class, experiment was conducted before their class in June 2014.

Procedure

In the experiment, participants were told that a marketing research company was evaluating an existing product and invited them to join their product evaluation test. Two products were going to be evaluated (movie and alkaline batteries).

First, participants were divided into 2 groups, one in the "before-condition" while the other one in the "after-condition" depending on providing them product information before or after presentation.

Each group was divided into 2 cells, and each cell evaluated one product only. In the "before-condition", participants were provided product information to read in text format. After three to four minutes, we either showed the packaging and individual batteries outlook of alkaline

[1] The hedonic and utilitarian dimension points of four products: Movie (5.97 vs. 3.19), Magazine (4.00 vs. 5.21), Alkaline batteries (2.65 vs. 4.90), Sports Bottle (3.64 vs. 4.99).

batteries or a four-minute Movie trailer depending on which product type group participants belonged to, utilitarian or hedonic. Then participants were asked to fill in the evaluation form.

In the “after-condition”, the product photography or movie trailer was shown in the screen first. Thereafter participants were provided product information to read in text format. After three to four minutes, participants were asked to fill in the evaluation form. For the control group, we invited 29 white collar employees to participate, with only the product presented with no particular information order.

Measurement scale

This experiment tested both affective and cognitive product evaluation. The affective likelihood of product evaluation was measured on a seven-point semantic differential scale (not at all likely=1; very likely=7) adapted from Melnyk, Klein and Völckner (2012) studies.

Cognitive product evaluation was measured by a two-item seven-point semantic differential scale (low quality vs. high quality; not at all reliable vs. highly reliable) adapted from D. Biswas, A. Biswas and Chatterjee (2009). Analysis of variance (ANOVA) was used for comparing the results. Since hedonic product (movie) is not appropriate to have cognitive evaluation, and it is not our main focus product in this study, we will only test its affective evaluation in the experiment.

3.3 Manipulation check

In order to test the original affective and cognitive evaluation of the product, 29 white collar employees were invited to rate them. Two products were shown to participants directly without giving information. For the affective evaluation, the mean rate of hedonic product (movie) was 3.35 which was not significantly different from “before or after condition” (both $p>.00$), while the

mean rate of utilitarian product (Alkaline battery) was 4.33 which was significantly smaller than the “before-condition”, but not significantly higher than the “after-condition”.

For cognitive evaluation, the mean rate of utilitarian product (Alkaline battery) was 3.64, which was significantly smaller than the “before-condition” but not the “after-condition”.

3.4 Results

The Univariate Analysis results show that there was no main effect of product type on affective evaluation ($p>.05$), but information order does have effect on it ($F(2,116) = 5.065$, $p <.05$) while the interaction effect between product type and information order on affective evaluation was significant ($F(2,116) = 21.381$, $p <.01$). As expected, for hedonic products, the affective evaluation was significantly higher when information was provided after presenting the product ($M_{before} = 3.84$, $M_{after} = 4.96$, $p <.05$); while for utilitarian products, the affective evaluation was significantly lower when information was provided after presenting the product ($M_{before} = 5.05$, $M_{after} = 3.95$, $p <.05$). Therefore H1 is supported.

Similarly, as predicted, for cognitive evaluation of utilitarian products, the mean difference before and after presenting the product information was significantly different, providing information before presentation obtained higher evaluation ($M_{before} = 5.57$, $M_{after} = 4.27$, $p <.05$). Thus, H2 is supported.

Figure 1

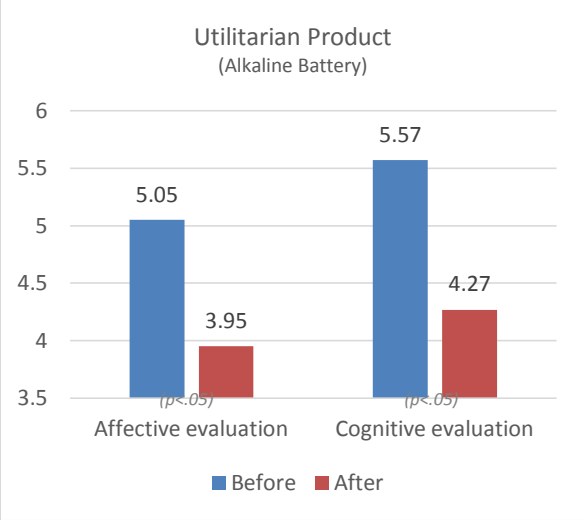
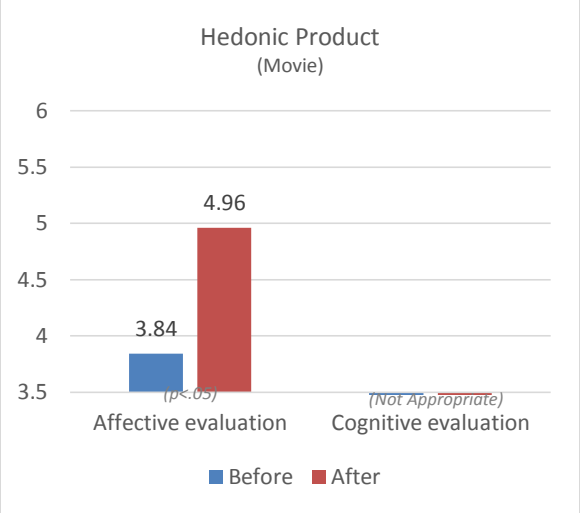


Figure 2



3.5 Discussion

Consistent with Wilcox, Roggeveen and Grewal (2011)'s study, for hedonic products, result of experiment 1 showed the information order influences the affective evaluation. In addition, presenting product information after showing the product results in higher evaluation. It indicated that when people first see the product, they will create a first impression from its physical outlook based on global beliefs and personal likelihood. This spontaneous affective reaction will directly affect their subsequent evaluation, and this feeling can be separated from any product information provided.

For utilitarian products such as alkaline batteries, which are function-oriented, people will normally judge cognitively, and this approach should be based on contextual information more than the affective impression. Therefore, as our results showed, information order influences both affective and cognitive evaluation of utilitarian products.

Higher evaluation can be gained if product information was presented before showing the product. It might be because people will normally use the information received later to support their beliefs (Cherney, 2001). In addition, search information (e.g. battery volume, country of

origin) benefits the cognitive product evaluation very much. Hence, presenting product information before showing the product is the best combination to gain a higher evaluation for utilitarian product. Therefore, different conditions might affect the results accordingly, so we test another two conditions on utilitarian product evaluation in the following experiments.

4. Experiment 2

4.1 Product brand selection

Beside of original marketing mix 4Ps (Price, promotion, product, place), advertising and packaging are two important elements in terms of marketing communication variables (Ghoi 2009). Hence, the following experiments included these two realistic elements for generate more ideas of information order to utilitarian product.

The main purpose of experiment 2 was to test the information order effect on utilitarian products by providing either experience or search advertisement. Alkaline batteries were used as tested products. In order to choose two suitable brands for the experiment, 14 white collar employees participants were invited to rate the likelihood of 8 existing alkaline batteries by using a 7-point Likert scale (1 = very dislike, 7 = very like). The likelihood mean rate of Duracell (M = 5.36) and Energizer (M = 5.46) were not significantly different. Therefore, we also tested the product attributes of these two brands, by using a five-item seven-point semantic differential scale (bad/good, poor/great, low/excellent, low value/high value, bad/good quality). The product attitude mean rate of Duracell (M=5.57) and Energizer (M=5.73) were not significantly different as well. Therefore, brand name will not influence the experiment, and we will use them as our experiment products.[2]

4.2 Methodology

[2] The mean rate of 8 alkaline batteries : Chang Hong (2.46), Duracell(5.36), Energizer(5.46), GP(5.36), Maxell(3.36), Panasonic(4.86), Sony(4.29), White elephant(2.36)

Design

122 college students aged from 16 to 18 years participated in this experiment (74 were female), which employed a 2 (information order: before vs. after) by 2 (advertisement type: experience vs. search) between-subjects design. Each cell size was around 26 to 34 people randomly assigned. The experiment was conducted before their class in June, 2014.

Procedure

Similar to experiment one, participants were invited to evaluate a company existing product. They were divided into two groups, one in the "before-condition" (provide product information before presenting the product), and the other one in the "after-condition" (provide product information after presenting the product). Each group was divided into two cells and each cell should only evaluate one product. For the product information, we prepared an experience advertisement of Energizer, which describes Energizer like a superman with long lasting energy that can solve any problem. The other search advertisement was for Duracell, which directly mentioned its "duralock" technology to show its long lasting feature.

For the control group, we invited 27 college students to participate, with only advertisement presented and no information order involved.

Measurement scale

The same measurement scale to rate the affective or cognitive product evaluation as in experiment one was employed, and analysis of variance (ANOVA) was used for compare the results.

4.3 Manipulation check

In order to sure the experience and search advertisement got the same evaluation from participants. We invited 27 university students to test. Students were divided into two groups and each group should evaluate one type of advertisement only. The affective evaluation of experience and search advertisement showed no significant difference ($M_{experience}$ = 5.46, M_{search} = 5.35, p>.05), and the cognitive evaluation showed no significant difference either ($M_{experience}$ = 5.96, M_{search} = 5.67, p>.05).

4.4 Results

For both affective and cognitive evaluation, the Univariate Analysis results showed that there were no main effects of information order on them (p >.05) while the effect of information type on affective evaluation (F (1, 144) = 18.009, p<.05) and cognitive evaluation (F (1, 144) = 4.573, p<.05) were significant. Meanwhile, the interaction effect between information type and information order on affective evaluation (F (1,144) = 9.353, p<.05) and cognitive evaluation (F (1,144) = 6.359, p<.05) were also significant.

Specially, for the affective evaluation, providing experience advertisement after presenting the product, the evaluation was significantly higher compared with before presenting the product (M_{before} = 4.18, M_{after} = 4.90, p<.05), while there was no significant difference between providing search advertisement before or after presenting the product (M_{before} = 5.84, M_{after} = 5.12, p>.05), Thus, H3 is supported.

On the contrary, for the cognitive evaluation, there was no significant difference between providing experience advertisement before or after presenting the product (M_{before} = 4.81, M_{after} = 5.16, p>.05), while providing search advertisement before presenting the product, the evaluation was significantly higher compared with after presenting the product (M_{before} = 5.92, M_{after} = 5.10, p<.05), H4 is supported.

Figure 3

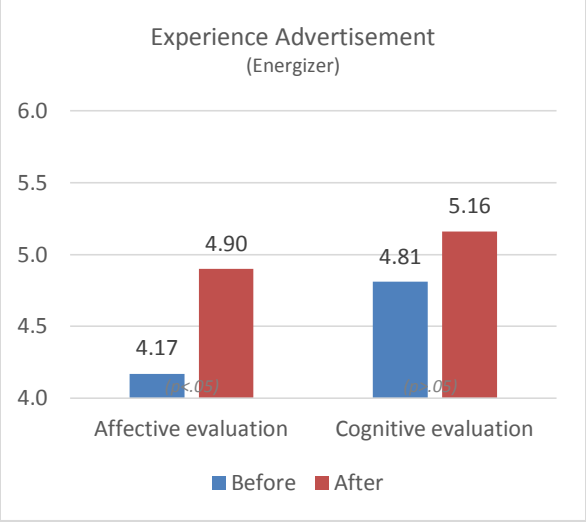
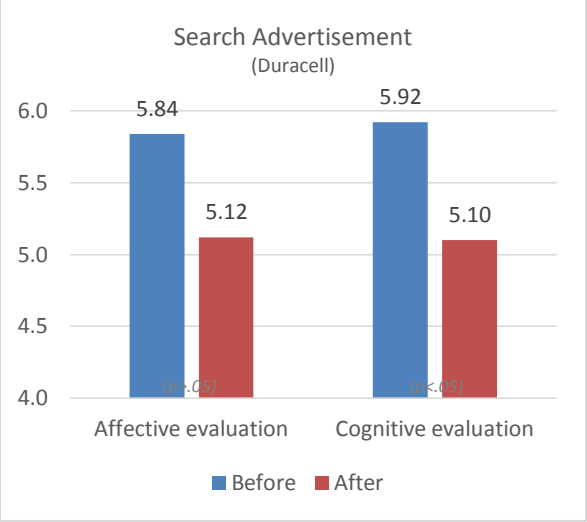


Figure 4



4.5 Discussion

Affective evaluation is typically based on direct emotional reaction, which is related to personal belief and sensory experience, while cognitive evaluation is more based on utilitarian considerations. It is difficult for people to evaluate without enough product information. Similarly, people 's evaluation should only be based on the content of the information, while they evaluate utilitarian products based on cognitive evaluation more than affective evaluation, and information order doesn't influence the evaluation results.

However, based on Yeung and Wyer (2004)'s work, different product information (e.g. picture, advertisement) can stimulate consumers to use different judgment criteria, and information order might also influence the results. The experiment reflects this.

We tried to use experience advertisement to stimulate participants to judge the product from the affective direction, and use search advertisement to stimulate participants to judge from the cognitive direction. Finally, the information order effect appears in the combination of "experience advertisement with affective evaluation" and "search advertisement with cognitive evaluation", but has no effect on the combination of either. It might be because when

participants accessed the search information or did cognitive evaluation combined with experience information or evaluation, it leads them to cool down their emotion. Their emotion didn't influence the evaluation any more, and the information order effect disappeared (Yeung and Wyer, 2004).

Therefore, consistent with experiment 1, in the combination of experience advertisement with affective evaluation; the study outlines that this combination urged participants to judge on the affective dimension - just like judging a hedonic product. In the combination of search advertisement with cognitive evaluation, presenting search advertisement before showing the product received the highest evaluation of all combinations. It also reflected that, search advertisement might also stimulate emotions and affect the placing of information order.

In experiment 3, we tried other conditions which might require positive or negative emotions for participants in the utilitarian products to test again the results.

5. Experiment 3

5.1 Product brand selection

The main purpose of experiment 3 was to try to use unattractive packaging in utilitarian products to stimulate negative emotional reaction, and see whether information order effect will occur. Together with the pretest of experiment two, 14 white collar employees were asked to rate eight existing alkaline batteries packaging by using a seven-point scale (very ugly=1, very nice=7). Energizer (M = 5.50) obtained the highest mean and White Elephant (M = 2.36) received the lowest mean. We used these two brands as our experiment products.[3]

5.2 Methodology

[3] The mean rate of 8 alkaline batteries : Chang Hong (2.69), Duracell(5.15), Energizer(5.50), GP(5.21), Maxell(3.64), Panasonic(5.07), Sony (4.29), White elephant(2.36)

Design

103 white collar employees and college students aged from 18 to 30 years (44 were female) participated in the experiment, which employed a 2 (information order: before vs. after) by 2 (product packing: unattractive vs. normal) between-subjects design. Each cell size was around 24 to 28 people randomly assigned. The experiment was conducted in Sep, 2014.

Procedure

Similar procedure as experiment one, participants were asked to evaluate a company existing product, and were divided into 2 condition groups (before and after). There were two products going to be evaluated (Energizer and White Elephant) which represent normal and unattractive packaging respectively. Each group was divided into 2 cells, and each cell only evaluated one product. We provided product information in text-format, and gave 3-4 minutes for participants to read. For the control group, we invited 23 white collar employees to participate, with only the product presented and no information order involved.

Measurement scale

We employed the same measurement scale to evaluate affective or cognitive product as experiment 1 and 2, and we used analysis of variance (ANOVA) to compare the results.

5.3 Manipulation check

To make sure the two packaging had significant difference, we invited 50 college students to rate them before the main experiment. Students were divided into 2 groups and each group should only evaluate one product. Product photos of battery packaging were shown on screen

without other information provided. The affective evaluation of normal packaging battery was significantly higher than unattractive packaging (M_{Ugly} = 5.41, M_{Normal} = 2.58, p<.05), and the cognitive evaluation of normal packaging was significantly higher as well (M_{Normal} = 5.96, M_{Ugly} = 2.5, p<.05), while purchase intention of normal packaging was also higher (M_{Normal} = 5.74, M_{Ugly} = 2.87, p<.05).

5.4 Results

The Univariate Analysis result shows that the interaction between information order and product packaging on affective evaluation (F(2,130)=5.59, p<.05) and cognitive evaluation (F(2,130)=25.10, p<.05) are all significant, while the individual effect of information order or packaging was also significant on affective evaluation and cognitive evaluation (both p<.05).

In terms of the affective evaluation, the mean difference of providing information before and after presenting an unattractive packaging product was not significant (M_{before} = 4.71, M_{after} = 3.96, p>.05), while providing information before presenting a normal packaging product, the evaluation was significantly higher compared with after presenting the product (M_{before} = 6.15, M_{after} = 5.33, p<.05), Thus, H5 is supported.

In terms of the cognitive evaluation, providing information before presenting an unattractive packaging product got higher evaluation than after presenting the product (M_{before} = 4.79, M_{after} = 3.5, p<.05), while the mean difference of providing information before and after presenting a normal packaging product was not significant (M_{before} = 6.19, M_{after} = 5.56, p>.05). Thus, H6 is supported.

Figure 5

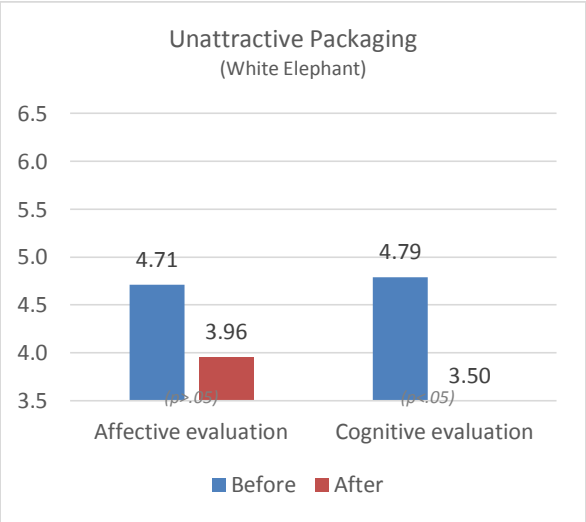
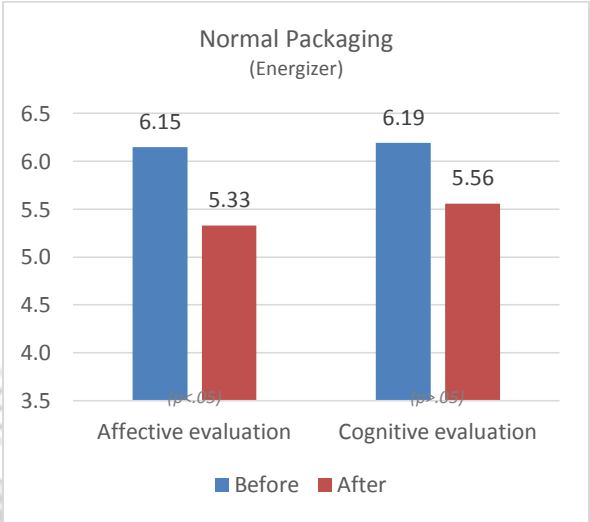


Figure 6



5.5 Discussion

Product appearance is another critical issue for evaluating products, even utilitarian products. People form their initial impression from the product appearance, and if it elicits affective reactions, the emotion will influence the evaluation result as well. (Yeung and Wyer, 2004).

In this experiment, we tried to use unattractive and normal packaging as stimulation to enhance emotional feeling of the participants. As the result showed, the information order effect appeared in the combination of “normal packaging with affective evaluation” and “unattractive packaging with cognitive evaluation”, and there is no effect on combination of either.

We believe that when judging the unattractive packaging utilitarian product, people will normally judge cognitively. Therefore, appearance effect does not yet appear when doing the affective evaluation as participants were still be judging based on product information. While doing the cognitive evaluation, as the unattractive packaging created a negative impression of the product, participants became confused between the negative impression and the neutral product

information. They judged the product based on the first impression, and this emotion influenced the evaluation process and information order effect appeared.

However, for the normal packaging product, since the packaging didn't elicit a strong emotional reaction of the participants, the case is similar to experiment one: providing product information before showing the product will get higher affective evaluation. Although for normal packaging product, the cognitive evaluation is not significantly different between providing information before or after showing the product. The mean rate of before showing the product is higher than after, which is similar to Experiment one.

Table 1 Research result of three experiments

	Affective evaluation		**Cognitive evaluation**	
	Before	**After**	**Before**	**After**
Experiment 1				
Utilitarian product	5.05**	3.95**	5.57**	4.27**
Hedonic product	3.84**	4.96**	N/A	N/A
Experiment 2				
Experience advertisement	4.18**	4.90**	4.81	5.16
Search advertisement	5.84	5.12	5.92**	5.10**
Experiment 3				
Unattractve packaging	4.71	3.96	4.79**	3.50**
Attractive packaging	6.15**	5.33**	6.19	5.56

*** p<0.05*

6. Conclusions

When people first view the product appearance, its physical outlook could elicit people to form an impression by their global belief and personal preference. This could be separate from any additional detail information provided later. This direct emotional reaction could create either favorable or non-favorable feelings.

Many previous studies agree that this impression could influence the product evaluation result later. Although this kind of product appraisal is theoretically cognitive in nature, it can often elicit nonverbal affective reaction, and it is not limited to hedonic but utilitarian product. As the experiments show, product evaluation for utilitarian product could be influenced as well. Previous studies found that product evaluation is not only based on first impression, the evidence of confirmatory information processing identified that, people like to use the information they received later to confirm their feeling. But sometimes there is confusion between the first impression and information they receive later, and the time gap between should be the reason for information order that occurs.

Because of the nature of utilitarian products, people's judgment will normally focus on cognitive consideration, e.g. quality, reliability, price, safety, etc. It seems affective reaction won't influence in the evaluation process as cognitive considers detail and reality information. The judgment should be the same, no matter whether the information is provided first or later. However, as the experiments show, emotional reaction can be created by different conditions.

In Experiment 2, the "experience advertisement" with "information order effect" does influence the judgment, and makes the results change. It also reflects that many digital products in the market use "experience advertisement" as stimulus in the consumer purchase process. Therefore, "experience advertisement" with significant "information order" has an effect on

affective evaluation, while “search advertisement” with significant “information order” has an effect on cognitive evaluation.

Marketers could make appropriate promotional strategies to posit their product accurately. For example, if they want to emphasize the product function and quality, then they can use “search advertisements” while showing the product appearance later. If the marketers want to emphasize on the product‘s fashion appearance, they should use “experience advertisement” which later shows the product appearance, in order to gain a better evaluation.

Experiment 3 also indicated consumers care about the product appearance even if it is a utilitarian product, as the product outlook is also one of the stimulations besides “information order effect” on evaluation. Normal or nice packaging of utilitarian products can gain consumer’s high affective acceptance, and unattractive packaging for utilitarian products could only gain consumer cognitive acceptance.

Both unattractive and normal packaging, presenting “search information” before showing the product outlook could get better evaluation. By using “information order effect” during promotion, marketers can only present product information first and show the product appearance later for unattractive packaging products. It would lead consumers to basically believe in the product’s quality. For normal packaging products, marketers could also show the product information first. They can let consumers basically accept the product by affective and cognitive considerations, and increase their purchase intentions as well.

In conclusion of the 3 experiments, the utilitarian product should use cognitive advertisement for promotion, and show the product appearance subsequently, and search information could add

value to the product evaluation. Also, information order can also add value to the evaluation as well and let consumers accept the product with cognitive and affective consideration.

7. Limitation and Future Study

Due to limited time and resources, this current study does not cover all kinds of demographics. The experiment scale and control group scale are also limited by the class size. This study might not cover all kinds of conditions, and the manipulation check might not be detail enough to avoid all kinds of sampling error, therefore, it could still give marketers more ideas on utilitarian product in terms of presenting product information. For future studies, it is possible to compare the results between male and female subjects, as males are more focused on function, and females are more focused on appearance. This might affect the results of the experiment. It is also possible to compare the results between sampling and appraisal of the product. It also can compare the result of different educational background people. Although utilitarian products should always state clearly their function and quality, people with different backgrounds might have different expectations on them, and it might also affect the results. Finally, the experiments can try more different conditions, for example positive and negative mood, favorite and not favorite branding, high and low price, etc.

IX. References:

Berg, H.V.D., Manstead, A.S.R., Pligt, J.V.D. and Wigboldus, D.H.J. (2006), "The Impact of Affective and Cognitive focus on attitude formation," Journal of Experimental Social Psychology, Vol.42 No.1, pp. 373-379

Biswas, D., Biswas, A. and Chatterjee, S. (2009), "Making Judgement In a Two-sequence Cue Environment: The Effects of Differential Cue Strengths, Order Sequence, and Distraction," Journal of Consumer Psychology, Vol.19 No.1, pp. 88-97

Biswas, D., Grewal, D. and Roggeveen, A. (2010), "How the Order of Sampled Experiential Products Affect Choice," Journal of Marketing Research, Vol.47 No.3, pp. 508-519

Chernev, A. (2001), "The Impact of Common Features on Consumer Preferences: A Case of Confirmatory Reasoning," Journal of Consumer Research, Vol.27 No.4, pp. 475-488

Ghoi, C.L. (2009), "A Review of Marketing Mix: 4Ps or More? " International Journal of Marketing Studies, Vol.1 No.1, pp. 1-14

Dodds, W.B., Monroe, K.B., & Grewal, D. (1991), "Effects of price, brand, and store information on buyers' product evaluations," Journal of Marketing Research, Vol.28 No.3, pp. 307-319

Ge, X., Häubl G. and Elrod T. (2012), "What to Say When: Influencing Consumer Choice by Delaying the Presentation of Favorable Information," Journal of Consumer Research, Vol.38 No.6, pp. 1004-1021

Gürhan-Canli, Z. (2003), "The Effect of Expected Variability of Product Quality and Attribute Uniqueness on Family Brand Evaluations," Journal of Consumer Research, Vol 30 No.1, pp. 105-114

Kirmani, A., & Rao, A. (2000), "No Pain, No Gain: A Critical Review of the Literature on Signaling Unobservable Product Quality," Journal of Marketing, Vol.64 No.2, pp.66-79

Melnyk, V., Klein, K. and Völckner, F. (2012), "The Double-Edged Sword of Foreign Brand Names for Companies from Emerging Countries," Journal of Marketing, Vol.76 No.6, pp.21-37

Micu, C.C. and Coulter, R.A. (2012), “The Impact of pretrial advertising on posttrial product evaluations: Assessing the Effects of Attribute Information for Hedonic and Utilitarian Product,” *Journal of Marketing Theory and Practice*, Vol.20 No.2, pp. 189-201

Nowlis, S.M. and Shiv, B. (2005), “The Influence of Consumer Distractions on the Effectiveness of Food-Sampling Programs,” Journal of Marketing Research, Vol.42 No.2, pp. 157-168

Peterson, D.K. and Pitz, G.F. (1988), “Confidence, Uncertainty, and the Use of Information,” Journal of Experimental Psychology: Learning, memory, and Cognition, Vol.14 No.1, pp. 85-92

Voss, K.E., Spangenberg, E.R. and Grohmann, B. (2003), “Measuring the Hedonic and Utilitarian Dimensions of Consumer Attitude,” Journal of Marketing Research, Vol.40 No.3, pp. 310-320

Wadhwa, M., Shiv, B. and Nowlis, S.M. (2008), “A Bite to Whet the Reward Appetite: The Influence of Sampling on Reward-Seeking Behaviors,” Journal of Marketing Research, Vol.45 No.4, pp. 403-413

Wilcox, K., Roggeveen, A.L. and Grewal, D. (2011), “Shall I Tell You Now or Later? Assimilation and Contrast in the Evaluation of Experiential Products,” Journal of Consumer Research, Vol. 38 No.4, pp. 763-773

Yeung, C.W.M. and Wyer, R.S. (2004), “Affect, Appraisal, and Consumer Judgement,” Journal of Consumer Research, Vol.31 No.1, pp. 412-424

Appendix A

Experiment 1

Hedonic Product information ---- Movie

The foreign fascinating movie - "Vampire Academy", will be officially available in Macau Galaxy UA cinema by January. It is adapted from one of the New York Times best-selling series of novels and is directed by Mark Fairwhale Waters, the director of "Mr. Popper's Penguins". Ticket is priced at MOP 90, buy two get one free.

The story is based mainly on the racial struggle of the Vampire world. As a Dhampir girl, Rose Hathaway (acted by Zoey Deutch)'s life mission is to protect her Moroi best friend, Vasilisa "Lissa" Dragomir (acted by Lucy Fry). In order to achieve this mission, Rose must enter St. Vladimir's Academy to get trained through a series of harsh physical and martial practices. Not long after, the racial war broke out on a verge, at this severe moment, Rose finds herself caught in a forbidden romance with her instructor, Dimitri Belikov (acted by Danila Kozlovsky), and on the other hand, Lissa and her boyfriend, Christian Ozera (acted by Dominic Sherwood), were facing countless obstructions on their relationship. Will love ruin the two girls' lives?

Hedonic Product picture ---- Movie

Utilitarian Product information ---- Alkaline battery

Maxell alkaline battery, which is made from Japan, uses the exclusive Voltage leakage-resist technology that ensures the safety of consumers. With the expansion of battery void volume, it provides sufficient power supply. A pack with 5 batteries is priced at MOP 15, while the special family pack with 24 batteries is priced only at MOP 34.8. Available in all convenience stores and supermarkets.

Utilitarian Product picture ---- Alkaline battery

Appendix B

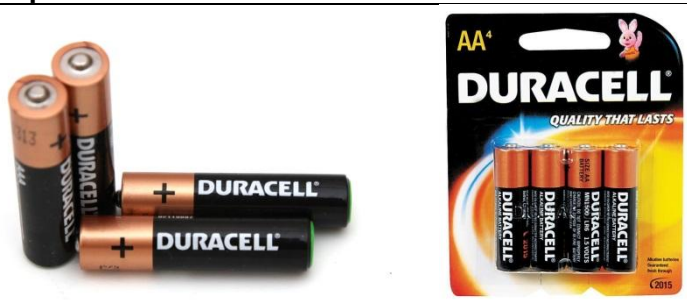
Experiment 2

Experience Advertisement --- Energizer

Product picture ---- Energizer

Search Advertisement --- Duracell

Product picture ---- Duracell



Appendix C

Experiment 3

Unattractive packaging --- White Elephant

The product that we are going to evaluate is a brand of alkaline battery. It is manufactured by a battery-specialized factory in Shanghai which has over 80 years of experience, and it has also passed the ISO9001:2000 Quality Safety test. A pack of 4 batteries is priced only at MOP 2, but outstandingly its power is able to reach 95% of foreign brands. In this promotion month, for every 4 batteries purchased, one battery will be given for free. Available in all convenience stores and supermarkets.

Product picture ---- White Elephant

Normal packaging --- Energizer

The product that we are going to evaluate is a brand of alkaline battery.
It is jointly invented by two companies from Singapore and the United State. It has passed through the IEC international safety standard test, in which when used on high power consumed products, its power generated is 5 times stronger than other ordinary carbon-zinc battery.
It is lasting and durable, and a pack of 4 batteries is priced only at MOP 9. In this promotion month, for every 4 batteries purchased, one battery will be given for free.
Available in all convenience stores and supermarkets.

Product picture ---- Energizer

UNIVERSIDADE DE MACAU
仁義禮知信
澳門大學

Appendix D

Product evaluation form

Q1: Overall do you like this product? (1 represents 'definitely not'; 7 represents 'definitely yes')

Definitely Not 1 2 3 4 5 6 7 Definitely Yes

Q2: In each of the following rows of adjectives, which adjective do you think is more suitable in describing the product?

1) Poor Quality 1 2 3 4 5 6 7 Good Quality
2) Low reliability 1 2 3 4 5 6 7 High reliability

Personal Information:

1) Age: 20 or below 21-30 31-40 41-50 51-60
2) Gender: Male / Female
3) Monthly Salary:
   $10000 or below $10000-$15000 $15001-$20000 $20001-$25000 $25001-$30000
   $30001-$35000 $35001 or above