# IMPROVEMENT OF THE VALENCIAN RETAIL STORES COMPETITIVENESS APPLYING EMOTIONAL ENGINEERING METHODOLOGIES

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## ABSTRACT

The present paper aims to explain how Emotional Engineering Techniques can help the Valencian Trade to improve its competitiveness. While these methodologies are commonly used in the concept and product evaluation stages, the present case study aims to go one-step further by applying them in the stage of the development of a Strategic Plan.

The *Confederación de Empresarios del Comercio Valenciano* (CECOVAL), with the collaboration of the *Instituto de Biomecánica de Valencia* (IBV) has approached the study of consumers' emotional perception of Valencian retail stores, as well as their influence on the intention of buying and recommending a store.

Thirty-five valencian retail stores from different sectors took part in this study. Oneminute-long videos simulating the entry and a short tour in their establishments were the selected stimulus. The sample of respondents was composed of thirty-two Valencian consumers with ages ranging from 25 to 50 years old. The experimentation took place in simulated conditions where the experience of the first approach to the establishment was reproduced. The questionnaires were designed according to Semantic Differential

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methodologies (Osgood et al, 1996). An emotional mapping of how Valencian retail stores are perceived was obtained. This was the basis for the elaboration of a semantic universe that showed which emotional terms were sufficiently stimulated by the current Valencian retail stores, and which emotional terms constituted a differentiation opportunity. The results obtained show the strength of the emotional engineering methodologies as a tool to collaborate in the design of an effective service differentiation strategy.

**Keywords**: Emotional perception, stimulus, Semantic Differential methodologies, emotional engineering, Intention of buying.

### 1. INTRODUCTION

In 2008, in the belief that the Valencian retail sector depends on innovation and with the main objective of reinforcing the competitiveness of Valencian retail stores, the *Confederación de Empresarios del Comercio Valenciano* (CECOVAL) developed a project with the collaboration of the *Instituto de Biomecánica de Valencia* (IBV).

This project was selected in the framework of an operative programme co-financed by the European Regional Development Fund -FEDER- and approved by the II Competitiveness Plan for Valencian stores 2008, organised by the *Instituto de la Mediana y Pequeña Industria Valenciana* (IMPIVA).

As the economy has moved from market centred to user driven (Vinyets, 2000; Gobé, 2001), nowadays industry is faced with a new consumer who demands the "products they desire, exactly when they want them, through venues that are both inspiring and intimately responsive to their needs" (Gobé, 2001; Norton, D. 2003). In today's market, product and service differentiation not only comes from delivering top quality services but from delivering the right emotional appeal along with them. Starting from the premise that innovation for competitiveness should be aimed towards those aspects which have the greatest effect on the success of retail stores, this project was carried out with a people-oriented design focus (POD).

The POD focus not only reflects the opinions of professionals and experts, but also considers that what consumers want, expect and need is fundamental in order to offer it to them in the form of goods and services. Ultimately it is they who define a retail store's success. This approach is highly innovative as it is based on orientation towards the user and it is the first time that it has been applied to the commercial sector.

In this way, the main objective of the project was to improve the sector's competitiveness and guarantee success from the consumer's point of view.

#### 2. METODOLOGY USED

The development of the project consisted in the first place of defining a model of success for the Valencian retail sector by, on the one hand, integrating competitiveness factors as expressed by professionals in a panel of experts and personal interviews (Page et al, 2001), and on the other hand, success factors expressed by consumers in a discussion group and later validated through a personal survey (Page et al, 2001).

The success factors were grouped together, according to sector professionals in five areas of the retail store:

- The quality of the offer
- Customer service
- Shop and their facilities
- Services added to the purchase
- Loyalty services

Finally emotional success factors will be taken into account, extracted through the application of emotional engineering techniques (Maekawa and Nagamachi, 1997; Matsubara et al, 1998; Such, M. 2004). Through these techniques the consumers valued their perception of the retail stores by viewing a one minute video about each of the establishments participating in the study. The video simulated the customer approaching the point of sale, carrying out a short route through the interior (Figure 1).



Figure 1: Emotional evaluation of the Valencian retail stores in the Living Lab of IBV

Thirty-five commercial establishments from different activity sectors and with different locations participated in the project, as can be seen in table 1. Likewise, many Valencian retail customers participated, both in the personal survey, the emotional evaluation of stores and the developed group dynamics.

Type of retail store	Location			Total	
	Valencia	Torrent	Xátiva	Ontinyent	
Food		2		1	3
Textile	15	5	2	4	26
Home	6	4			10
Leisure and	3	1		1	5
Culture					
Health-opticians-	4	3	1	1	9
Pharmacy					
TOTAL	28	15	3	7	53

Table 1: Distribution of retail stores participating in the project

In addition, the project explored the purchase experience according to the customers as a paradigm of innovation in the commercial sector. For this, a general model was first defined (Figure 2) from an extensive bibliographical search of both scientific and commercial and informative literature. Participative techniques with consumers were carried out using this model with the aim of generating new proposals and analysing expectations with regard to a specific product or service.



Figure 2: Experience buying model

The analysis of all this information led to an assessment of Valencian retail stores and a strategic plan based on R&D, training, promotion and investment activities, classified according to its importance in the market in basic Improvement (necessary to be in the market but not a guarantee of success), Competition (they have a linear relationship with likelihood of success in the sense that the more the better), of Differentiation (if not undertaken the likelihood of success is not jeopardised but if undertaken it is significantly increased) or of Maintenance of a good position.

# 3. RESULTS AND CONCLUSIONS

## 3.1. Success factors

Thirty-two success factors were identified from the results of the survey, the majority of which are of basic quality, with few differentiating ones found. This may be interpreted as a reflection of the need to search for differential and competitiveness arguments, as the basic quality factors only ensure the possibility to be in the market.

As for the importance of the retail store areas, quality of the offer and customer service stand out, the two related with services being those of least importance (Figure 3).



Figure 3: Importance of the retail store's areas of innovation

- The most important factors for success are:
- A wide range of products and services
- Salespeople with a wide knowledge of the offer, great ability to assess and attend to customers
- Friendliness of the salespeople
- Offering quality products
- Personalised treatment of the customer

The least important factors for success are:

- Availability of the product even though it is not in the shop
- Associations and collaboration between retail stores
- Home delivery

#### 3.2. Emotional success factors. Perception of Valencian retail stores

The first stage was the application of Product Semantics for obtaining the semantic space (SS) of retail stores. The process started compiling from several sources (final users, experts and promotional literature) the words and expressions used to describe the perception regarding by the current Valencian retail stores (Kansei words). Using all this information, words of the universal semantic were reduced to a fifty-five words to avoid too long questionnaires for respondents. The questionnaires were designed according to Semantic Differential methodologies (Osgood et al, 1996).

Thirty-two Valencian consumers with ages ranging from 25 to 50 years old took part in the evaluation of samples of thirty-five videos by means the semantic differential scales using randomized questionnaires based on five point semantic differential scales. The semantic spaces were obtained applying factor analysis to the respective evaluation results. SPSS 16.0 was used for the statistical analysis.

The perception that consumers have of the retail store is explained in a semantic space of ten concepts and in addition, the influence of the ten emotional concepts in the intention to purchase was analyzed using logistic regression models. It was shown that perception expresses over 50% of the probability that a consumer chooses to buy in a retail store and then goes on to recommend it.

As can be seen in figure 4, only six emotional conceps had influence in the intention to purchase. The most influential concept in the intention to purchase is the perception of friendliness which is much more pronounced than the others, followed by competitive, tidy, functional and dynamic, while sophisticated would have a negative influence.



Figure 4: Influence of emotional aspects which influence the intention to purchase

The analysis of the emotional perception of Valencian retail stores reflects a good situation in the sector although it has been detected that there is not a unified image as regards feelings such as orderly, functional, unsophisticated and professional and that there is a need to improve the stimulation of concepts such as friendly, competitive, dynamic and original.

#### 3.3. Strategic Plan for Valencian retail stores.

The carrying out of this project allowed for an analysis of the current situation of Valencian retail stores in terms of competitiveness, determining success factors from the point of view of the user, determining the image that the users have of the sector and how to influence this image to their benefit, paying special attention to communication.

As a result, an action plan was established for the four strategic areas that were studied in this project: R&D, Training, Promotion and Investment. The introduction of these will be the main instrument for improving and maintaining the sector's competitiveness, through innovation.

This plan identified 37 activities classified into four levels: basic improvement actions which increase the likelihood of success, of high quality and actions which should be carried out to maintain a competitive position.

	Basic	Competitiveness	Differentiation	Maintenance
	Improvement			
	R&DA.1. Application of emotional engineering for the design of premises and window displays which transmit a good image, strengthening the perception of friendliness and care.	R&DA.5. Cost-benefit analysis of the range and flexibility of opening hours	R&DA.12. Generate systems for the management of the purchase experience based on satisfaction and impact on the customer's quality of life.	R&DA. 16. To value the image of the traditional urban retail store.
	R&DA.2. Application of emotional engineering to improve the retail store's brand image.	incorporating new technologies and	R&DA.13. Explore and develop new business models based on integral advice. An aspect which is highly valued by customers.	
	R&DA.3. Application of sensorial and cognitive engineering for designing intuitive distributions of the offer at the point of sale.	strategies for the retail store according to	R&DA.14. Analyse possible personalisation models for products enabling the customer to feel an active part of the retail store.	
	R&DA.4. Generate environment control systems (lighting, aromas, etc.) which allow pleasant, comfortable atmospheres to be created, etc.	R&DA.8. Evaluate the mobility of the retail store's consumers with the aim of creating accessible, comfortable, safe and sustainable environments.	R&DA.15. Explore possibilities for innovation in the purchase phases of activation and loyalty through work techniques with users and benchmarking.	
R&D		R&DA. 9. Design and develop points of sale that offer pleasant purchasing experiences: multisensory, themed, interactive and flexible.		

 Table 2: Distribution of retail stores participating in the project

		R&DA10. Carry out actions which enable us to maintain contact with our customers		
		outside of the establishment (SMS, newsletters, exchange		
		of experiences, etc)		
		R&DA.11. To		
		incorporate new values which prevail		
		in society into the		
		design and/or		
		management of the		
		point of sale. E.g. Green Retailing.		
	TA. 1. Training in	TA. 4. Training in the	TA. 5. Training in	TA.8. Continuous
	brand image,	development of loyalty	the design of pleasant	training to maintain a
a n	branding, etc.	policies.	purchase	high assessing ability,
Training			experiences.	management and problem solving.

	Basic Improvement Competition		Differentiation	Maintenance
	TA. 2. Training in new		TA. 6. Training in	TA.9. Continuing
	products, services,		creating value for the	training on the quality
	new trends, etc.		customer at the point of	of the offer: labelling,
			sale through	rules, etc.
			comprehensive and	
			guided advice.	
	TA. 3. Training in		TA. 7. Training in	
	design, distribution		loyalty techniques that	
	and control at the		allow for contact with	
60 D	point of sale		customers to be	
Training	environment to create		maintained outside of	
Tra	welcoming spaces.		the establishment.	
	PA. 1. Brand image	PA. 3. Developing	PA. 5. Promotion	
	campaign for the small	activity programmes so	within the sector of the	the image of the
	and medium sized	that the customer enjoys	advantages of	traditional urban retail
	businesses.	himself/herself during	associations and	store.
		their purchase.	collaboration.	
	PA. 2. Combined	PA. 4. Promotion within		PA. 7. Promote
	actions to be up to	the sector of success		activities to maintain a
	date.	stories and		wide offer.
		comprehensive offer		
e		models.		
Promotion				PA. 8. Promote the
omo				control and guarantee
$\Pr$				of the quality of the

			offer.
	In. 1. To collectively	In. 4. Joint memorabilia	In. 6. Keep the
	implant the brand	campaigns associated	changing rooms
	image of Valencian	with the purchase	spacious, well-lit, air
	retail stores.	experience.	conditioned with
			sufficient privacy etc.
	In. 2. Collectively	In. 5. Analyse investment	
	implant innovations	campaigns incorporating	
	aimed at the design	improvements to recreate	
	and environment of	pleasant purchase	
	the leading premises.	experiences stimulating	
		all the senses.	
t	In. 3. Collective	In.6. Collectively implant	
ner	services such as home	new technologies which	
nvestment	delivery, repairs,	help sales both inside and	
Inv	parking, etc.	outside of the retail store.	

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## REFERENCES

- Osgood, C.; Suci, G.: Tannenbaum, P. (1996), "The measurement of meaning." University of Illinois Press.
- Vyniets, J. 2000, "Per un altro Marketing; Il nuovo Design si basa sull'esperienza." Domus, N° 826, pp 99.
- Gobé, M. 2000, "Emotional Branding". Allworth Press.
- Norton, D. 2003, "Toward meaningful brand experiences." Design Management journal Vol.14, N° 1 (2003).
- Page, A.; Porcar, R.; Such, MJ.; Solaz, J.; Blasco V. 2001, "Nuevas técnicas para el desarrollo de productos innovadores orientados al usuario." Instituto de Biomecánica de Valencia. Asociación de diseñadores de la Comunidad Valenciana. UPV. IMPIVA.
- Matsubara, Y.: Nagamachi, M. 1997 "Hypbrid Kansei engieneering system and design support". International Journal of Industrial Ergonomics, 19, pp. 81-92.
- Nagamachi, M., 1985, "Kansei Engieneering: A new ergonomic consumer-oriented technology for product development. International Journal of Industrial Ergonomics, 15 (1985), pp. 3-11.
- Such, M. 2004, "La ingeniería Kansei como modelo de simulación del fenómeno de la percepción. Aplicación en el sector del mobiliario de oficina". Universidad Politécnica de Valencia.