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HOW TO CREATE ATTRACTIVE CUSTOMER EXPERIENCE: IMPLEMENTATION OF KANO'S THEORY IN HIGHER EDUCATION

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Abstract: *Due to changing consumer preferences and current market trends, customized user experience has become a major challenge and imperative for business success. In order to deliver highly perceived quality, with the efficient use of time and costs, businesses need to know the preferences of their consumers and offer them only those attributes that add value to overall customer experience. The aim of this paper is to highlight the importance of perceived quality and its role in creation of attractive customer experience. For the purpose of this research, Kano's theory of attractive quality was used as a primary research method. The research was conducted among the students in order to determine the attributes of higher education services that add value to the overall students' experience. In addition to relevant literature review, this paper also has practical implications for improving the process of providing services in the field of higher education .*

Key Words: ***customer experience, Kano's theory, quality, value, customization***

1. INTRODUCTION

Research on mass customization has increasingly evolved over the last decade [1]. This concept was proposed by Davis [2] and after that developed by Pine [3]. Origin definition indicates that mass customization presents "developing, producing, marketing and delivering affordable goods and services with enough variety and customization that nearly everyone finds exactly what they want" [3]. Some modern views are more pragmatic, such as concept proposed by authors Salvador et al. [4] which explain MC simply as "a process for aligning an organization with its customer's needs".

In summary, MC is some kind of business philosophy and contemporary market approach which can be applied no matter of company size, nature of business or type of product or services. However, that doesn't mean that providing efficient customization to customer is sufficient. Customer perception creates the image of products or services brand – attributes that are satisfied and attractive for one customer, may not be adequate for others. Therefore, the perceived benefits that consumers derive from a MC offer are a key component of its success [5]. For the purpose of evaluation of perceived quality and value, the most popular and commonly used method is Kano's theory of customer satisfaction which is also known as Kano's theory of attractive quality. This method, in a combination with a SERVPERF method, was used as a primary research method in this study.

The aim of this paper is to highlight the importance of perceived quality and its role in creation of attractive customer experience. The research was conducted among the students of Faculty of Technical Sciences in Novi Sad, Serbia, in order to create future MC strategies from the customer viewpoint and to improve their educational experience.

The paper is organized as follows. Section 2 provides a relevant literature review about mass customization, the importance of perceived quality and customer experience in marketing and particularly in a case of higher education institutions. Section 3 describes Kano methodology and SERVPERF method, as well as the main elements of the research process. In section 4, we discuss the research results and highlight the potentials for future MC strategies in a case of particular higher education institution, while section 5 presents concluding remarks.

2. THEORETICAL BACKGROUND

For the purpose of this research, it is important to highlight some key theoretical aspects of mass customization, perceived quality and customer experience, as well as the specifics of higher education market.

2.1. Mass customization

Mass customization is a new industrial paradigm with a focus on "providing products and services that best serve customer needs while maintaining near mass production efficiency" [6]. Despite the fact that volume of mass production has a positive impact on economies of scale, satisfying individual customer's need also can be translated into higher value, thus achieving competitive advantage. MC approach enables company to focus their effort on particular offer elements which will result with the improvement of resource utilization [6]. In business success manner, MC can potentially

develop customer loyalty and increase company growth and market share [3].

Delivering superior consumer value presents the main concern of marketing managers [7]. The global value for customer is defined as "consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" [8]. Therefore, perceived quality is much more important for creating marketing and MC strategies, then technical quality per se. In addition, there are two groups of value sources in mass customization: the product and the mass customization experience or co-design process [9, 10]. In a context of this study, perceived quality and customer experience represent the main bases for the theoretical foundation of this research.

2.2. The importance of perceived quality for customer experience

The user perspective is emphasized in all marketing strategies in order to build and maintain brands. For example, Aaker [11] identifies three key perceptual brand variables: brand awareness, brand associations and perceived quality – and all three are considered as main determinants of brand loyalty. De Chernatony and McDonald [12] distinguish six types of brand attributes: awareness, image, perceived quality, perceived value, personality and organizational associations. Numerous studies testify that perceived quality is the most important element in the brand building process, and customer perception is a key driver of mass customization.

According to identified importance of utilitarian dimension in terms of user experience [13], the perceived quality of service (both in manufacturing and service sector) is a concept that needs to be adopted to understand the way users perceive a product or service [14]. The most important author in marketing services Grönroos [15], has developed a perceived service quality model that highlights two dimensions of quality: technical (*what* user gets?) and functional (*how* user is served?).

The perceived uniqueness of a mass-customized product/service has a positive influence on the utility consumers derive from mass customization [16]. In addition to the utilitarian value, it is important to develop the perceived benefits of the mass customization offer, where five key benefits nave been identified [5]: utilitarian value, uniqueness value and self-expressiveness value as a part of product value sources, and hedonic value and creative achievement value as customized experience value.

Loyalty is based on the user experience of a product or service. Therefore, successful customer management experience – CEM is considered as a key factor for building customer loyalty [17]. Given that individual user experience depends on all of his contacts before and during the purchase, and during and after the use of the product or service, customer satisfaction and loyalty depends on the perceived quality and all the utilitarian attributes of the product [13].

The MC experience value implies the interaction between the individual customer and the product/service design [5] by using the approach of preference revelation and brand performance customization. Also, marketing studies have shown that the customized consumer experience can have intrinsic value for the consumer [18]. Theoreticians and practitioners are united around the idea that specific attention must be given to the percieved benefits of the mass customization offer, especially considering the utilitarian value.

2.3. The role of consumer experience in higher education

The higher education institutions (HEI) may encounter specific issues at various stages of students life cycle, maintaining the record of student's history, avoiding duplications, customized communication with concerned departments etc., and "students are supposed to be the universal problems in view of student's and institution's information" [19]. Nowadays, students are more aware of their customer rights and of the gap between their expectations and the reality of performance of educational services [20]. For example, students who are paying for their education are expecting and demanding more support services , as well as the same quality, satisfaction and trust they enjoy from any other company [21]. In a field of HEIs, students need to be observed as primary stakeholders [22]. Therefore, there is an obvious need for development of organized system in terms of managing and monitoring the students experiences and relationship between faculties and students.

Higher education is being driven towards commercial competition imposed by economic forces, technology development, changing market trends and consumer (i.e. students') preferences, as well as the development of global education markets [23]. Quality in higher education is all about efficiency, high standards, excellence, value for money, fitness for purpose and customer orientation [24]. In order to deliver the best education services for their students, higher education institutions have to be concerned with how their students feel about their educational experience. Many universities and faculties perform some evaluation of the quality of education, as well as an assessment of student satisfaction. "Student satisfaction is an increasingly important indicator of the quality of teaching performance and can also be considered as an outcome measure of the education process" [25].

It's not easy to measure student satisfaction, and there are different indicators and approaches for measuring students' satisfaction. According to the subject of this research, a hybrid method of measurement will be used, by combining Kano's theory of perceived quality and SERVPERF method, as a method for measuring service quality.

3. METHODOLOGY

Utilitary elements [13] and perceived quality [14] are significant for customer experience, and they will be analyzed through the combined method of Kano's theory and SERVPERF methodology. For the purpose of evaluation of perceived quality and creation of attractive customer experience for students, a hybrid approach of Kano-SERVPERF combination was used. SERVPERF is

a method that measures the performance of a service or functional dimension of quality, and Kano model, also called the "theory of attractive quality", measures the perceived quality.

Kano model (*customer satisfaction model* or *model of attractive quality*) was developed in the 1980s [14] and ranks among the most powerful and most popular tools that control and evaluate the contribution of particular attributes of products/services in the overall generation of user values [26]. The attractiveness theory is a key determinant of the relationship between the technically achieved and user-perceived quality of product attributes [26]. Kano model provides an insight into a different categorization of quality attributes, classifying them into primary group as *must-be*, *one-dimensional* and *attractive*, and secondary group of attributes: *indifferent*, *reversal* and *questionable*. Figure 1 shows their different impact on customer satisfaction.

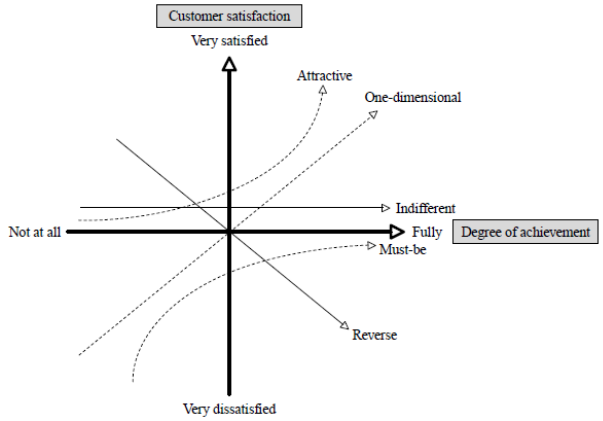

Fig. 1. *Kano model*

In its methodology, Kano model has a developed universal questionnaire, which consists of a specific combination of questions in a functional and dysfunctional form. The first question relates to the user attitude in a case where product/service attribute exists, and the second question relates to the user attitude in a case the attribute does not exist; responses are universal (Table 1).

Table 1. *Kano questionnaire*

Kano questions	**Responses**
Functional (positive) form of question Example: *If a car has an airbags, how do you feel?*	☐I like it that way ☐It must be that way ☐I am neutral ☐I can live with that ☐I dislike it that way
Dysfunctional (negative) form of question Example: *If a car doesn't have an airbags, how do you feel?*	☐I like it that way ☐It must be that way ☐I am neutral ☐I can live with that ☐I dislike it

Answers are processed using the Kano evaluation table, through which attributes are classified into the Kano attributes' categories by combining the responses to a functional and dysfunctional question [27] (Table 2)**.**

Table 2. *Kano evaluation table*

		Dysfunctional form of question				
		Like	*Must-be*	*Neutral*	*Live with*	*Dislike*
Functional form of question	*Like*	Q	A	A	A	O
	Must-be	R	I	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	I	M
	Dislike	R	R	R	R	Q

A–attractive, O–one-dimensional, M–must-be, I–indifferent, R–reverse, Q–questionable

It is important to define set of attributes which will be observed. Regarding to the service nature of higher education, SERVPERF method will be used as an instrument that measures service perrformance. SERVPERF method is a short version of SERVQUAL method, which represents a multidimensional scale that allows users to compare perceptions with their expectations regarding the quality of a particular service [28]. The SERVPERF instrument consists from 22 question divided into 5 dimensions (*tangibles, reliability, responsiveness, assurance and empathy)* [29]. Kano-SERVPERF hybrid method was used only in a function of QFD – quality function deployment [30]. In a case of this research, this hybrid method is used in order to create customized student experience.

The research was conducted on a Faculty of Technical Sciences in Novi Sad, Serbia, with a 742 students. Data were collected through the developed questionnare in real terms. Respodents were asked to answer how do they feel if faculty has or doesn't have any service attribute. Results and discussion are presented in a next section.

4. RESULTS AND DISCUSSION

The purpose of research was to determine which attributes or education services has higher or low impacts on students' satisfaction and which one can be more personalized and customezed. The questionnare had 44 questions according to Kano model about 22 SERVPERF attributes in a context of higher education services, as well as 22 questions about the importance of quality attributes and demografics. Summary of the share of SERVPERF attributes by Kano model in a case of Faculty of Technical Sciences is graphicaly represented on Figure 2.

Results analysis indicates the presence of all Kano attributes (M, O, A, I, R) except questionable (Q). This means that there were no contradictions in the respondents' answers, that all questions were well-formulated and well understood, which implies the validation of the formulated hybrid instrument SERVPERF-Kano.

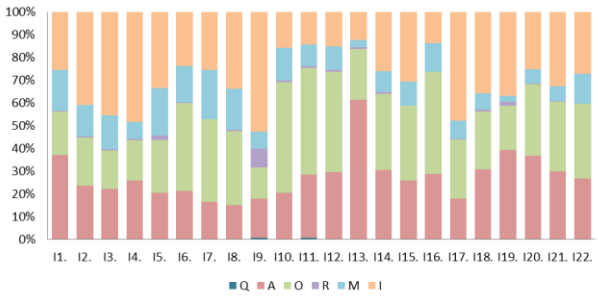

Fig. 2. *The share of SERVPERF attributes according to Kano model (case of FTS)*

According to Figure 2, it can be concluded that among all observed attributes there are three primary types of Kano attributes of perceived quality. Table 3 shows all SERVPERF dimensions and attributes as well as the primary category of each attributes in Kano model. The last three columns represent the satisfaction index (SI), dissatisfaction index (DI) and average satisfaction coeficient (ASC).

$$SI = (A + O)/(A + O + M + I) \quad (1)$$

$$DI = (-1)(O + M)/(A + O + M + I) \quad (2)$$

$$ASC = (|\,SI\,| + |\,DI\,|)/2 \quad (3)$$

The highest *must-be* scores (M) has the following attributes: *I5* (20.7%), *I7* (21.5%) and *I8* (18.1%). These are attributes that build the dimension of *Reliability* within the SERVPERF scale. It can be concluded that in general the reliability of an institution is an attribute that respondents consider obligatory, and in the absence of this attribute, users will be extremely dissatisfied. The one-dimensional or expected character (O) was especially emphasized in attributes: *I10* (48,7%), *I11* (47,1%), *I12* (44.0%) and *I16* (44,8%). The attributes *I10*, *I11* and *I12* belong to the *Responsibility* dimension, while *I16* is the dimension of *Assurance* within the SERVPERF scale. It can be concluded that the *Responsibility* and partial *Assurance* are quality dimensions that respondents perceive as expected (O) and whose existence and improvement contributes to the linear growth of the level of user i.e. students' satisfaction.

A significant share of attractive attributes (A) in the response structure according to the Kano model means that certain attributes users do not require nor expect them, but in a case of their presence, user's delight appears as the highest level of satisfaction. The most attractive attribut in a perceived quality of higher education services is *I13* (61,4%) – *employee responsiveness*. This attribute also has the smallest results of the respondents' indifference. In addition, significant results of the attribute *A* are: *I1* (37,2%), *I6* (21,2%), *I12* (29,6%), *I14* (30,3%), *I19* (39,1%) etc. Attractive attributes did not specifically concentrate on a single construct of SERVPERF scale, but their significant share appears in all dimensions: Tangibes, Reliability, Responsibility, Assurance and Empathy. Also, satisfaction indices *SI*, *DI* and *ASC* show positive results. If a *SI* value is closer to one, the impact of the given attribute is higher to the level of user satisfaction. Similar, if coefficient *DI* is closer to the minus one, the effect of the given attribute is higher on the level of user dissatisfaction.

Analysis and selection of these attributes can serve as a basis for creating excellence and customized students' experience, and also as a basis for ranking those attributes that will surely develop and improve in the future.

Table 3. *A summary of research results in a case of FTS*

SERVPERF dimensions and attributes		**Category in Kano model**	**SI**	**DI**	**ASC**
Tangibles	I1. Up-to-date equipment	Attractive	**0.56**	-0.37	0.47
	I2. Informative and visually attractive promotional material (brochures, website, magazine etc.)	Attractive	0.45	-0.35	0.40
	I3. Well dressed and neat employees.	Attractive	0.39	-0.32	0.36
	I4. Keeping the appearance of the physical facilities with the service type	Attractive	0.44	-0.25	0.34
Reliability	I5. Maintaining the teaching and extracurricular activities by schedule	One-dimensional	0.45	-0.45	0.45
	I6. Understanding students' problems	One-dimensional	**0.60**	-0.55	**0.57**
	I7. Reliability of the institution	One-dimensional	**0.53**	-0.58	**0.55**
	I8. Providing services in a timely manner	One-dimensional	0.48	-0.51	0.49
	I9. Keeping records of students accurately	Attractive	0.34	-0.23	0.29
Responsibility	I10. Transparency of dates, terms and deadlines for teaching and extracurricular activities	One-dimensional	**0.70**	-0.64	**0.67**
	I11. Getting a quick response from FTS employees	One-dimensional	**0.76**	-0.57	**0.67**
	I12. Availability and willingness of FTS teachers to help students	One-dimensional	**0.74**	-0.55	**0.65**
	I13. Prompt response of teachers at the Faculty to the demands of students (employee responsiveness)	Attractive	**0.84**	-0.26	**0.55**

SERVPERF dimensions and attributes		Category in Kano model	SI	DI	ASC
Assurance	I14. Trusting teachers	One-dimensional	**0.64**	-0.43	**0.54**
	I15. A sense of security in communication with FTS teachers	One-dimensional	**0.59**	-0.43	**0.51**
	I16. Courtesy of employees	One-dimensional	**0.74**	-0.58	**0.66**
	I17. Faculty support for teachers to do their job	One-dimensional	0.44	-0.34	0.39
Empathy	I18. Institutional care for each student	Attractive	**0.57**	-0.33	0.45
	I19. Personal attention of teachers to each student	Attractive	**0.60**	-0.22	0.41
	I20. Understanding the students' needs	One-dimensional Attractive	**0.68**	-0.38	**0.53**
	I21. Student interests as a priority	One-dimensional Attractive	**0.61**	-0.38	0.49
	I22. Working hours of the Faculty	One-dimensional	**0.60**	-0.46	**0.53**

5. CONCLUSION

In a case of FTS, the research results indicate that among the observed SERVPERF attributes, all types of Kano attributes appear (M, O, A, I, R), except the questionable attributes (Q). The SI, DI and ASC indices show that the existence and improvement of all SERVPERF attributes have a significant impact on the level of user satisfaction.

In order to deliver highly perceived quality with a high level of efficiency, HEIs need to know the preferences of their students and offer them the attributes that add value to overall customer experience. Considering that mass customization can potentially develop customer loyalty and increase company growth and market share, in a case of FTS, customized students' experience will increase their satisfaction and empower positive *word-of-mouth* communication. Practical implications of this study are related to future MC strategies of Faculty of Technical Sciences, which mean that this institution need to listen the needs and desires of their students in order to create them attractive user experience. Kano's theory can be implemented on every HEI which wants to create customized customer experience of highly perceived quality.

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