

**ICEST 2021****II International Conference on Economic and Social Trends for Sustainability of Modern Society****CUSTOMER SATISFACTION WITH ADDITIONAL  
PROFESSIONAL EDUCATION IN THE CONTEXT OF RISK-  
BASED THINKING**

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**Abstract**

The paper discusses the basics of ensuring customer satisfaction of additional professional education (APE) in the quality management system (QMS) of higher education institutions, founded on a risk-based approach in the interpretation of international standards ISO 9000:2015. The problems connected with identification and resolution of personal risks of the parties interested in educational services are investigated. The analysis of tools for identifying personal risks of customers and their transformation into the characteristics of educational services is carried out. The paper substantiates the prospects of studying the personal risks of customers associated with the development of additional professional programs in order to anticipate their expectations from educational services, based on the application of Kano model adapted to this study and Voice of Customer method. We propose a procedure for extrapolating consumers' personal risks into requirements and transferring the latter into characteristics of additional professional education services, expressed in terms understandable to the university management. As a result of the implementation of the proposed procedure in the educational process, the possibility of anticipating the expectations of the parties interested in educational services is considered at the stage of designing additional professional programs of APE. The paper gives arguments to prove reasonability of applying the proposed procedure for ensuring customer satisfaction in the context of risk-oriented thinking in relation to QMS APE.

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*Keywords:* Characteristics of educational services, ensuring customer satisfaction, personal risks, the quality management system of the university



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## 1. Introduction

Ensuring the satisfaction of customers and the parties concerned in additional professional education (APE) in the market of educational services is considered today as a tool for improving the effectiveness of the quality management system (QMS) of higher education institutions, within which additional professional programs are implemented. At the same time, focusing on the requirements and expectations of customers in modern conditions of educational organization management is considered as one of the goals of its mission (along with profit and social significance) and the main conceptual principle of its quality management system (within many international standards and models, in particular ISO 9000:2015, ISO 21001:2018, CQAF, TQM, ENQA, etc.) (Aniskina & Lunina, 2017; Aniskina & Terekhova, 2019; Fishman et al., 2018; Parshutina et al., 2019; Tyurikov et al., 2019).

The new interpretation of the process approach and the integration of risk-based thinking into the management of the quality management system of additional professional education (QMS APE) based on ISO 9000:2015 make it necessary to understand the procedures for ensuring customer satisfaction with the quality of educational services (Simkin et al., 2019).

In this regard, the university senior management should regularly monitor risks and opportunities that may affect the ability of APE to increase customer satisfaction. The university cannot manage the personal risks of customer – they are subjective, personalized, which implies that the consequences generated by the risk are directed at the subject, i.e., the customer who performs the activity, and therefore takes responsibility for choosing an alternative. However, the study of customer risks (problems, threats, errors, etc.) associated with additional professional education, and their understanding opens up opportunities for the university to anticipate the expectations of the parties concerned in APE.

## 2. Problem Statement

The study of this issue has shown some difficulties in obtaining information about the personal risks of the parties interested in APE, as well as with the availability of tools that allow you to correctly translate the risks of customers into their requirements, and then into the characteristics of educational services. At the same time, it should be taken into account that customers almost never speak about their risks that they may have when receiving an educational service.

This problem can be solved by developing a procedure that allows to extrapolate the risks of APE customers into the characteristics of educational services, expressed in terms understandable to the university management, which allows to increase customer satisfaction and competitiveness of the educational organization when implementing them.

In this regard, the study of personal risks of customers in order to ensure their satisfaction from obtaining an APE implemented by a higher educational institution seems appropriate.

## 3. Research Questions

Analysis of researches and publications in this subject area is based on the assumption that the procedure of ensuring APE customer satisfaction in the context of risk-based thinking is based on

identifying personal risks, parties concerned, definition (development) of tools and technologies that allow to transfer the identified risks into requirements for educational services. At the same time, consumer risks in this study are considered as problems, threats, errors, damages, etc., i.e. negative consequences caused by receiving additional educational services (Fedonin et al., 2020).

Study of this issue has revealed problems in extrapolating risks to consumer requirements, which are particularly explained by (Dombrovskaya, 2019; Lavrishcheva, 2017; Lupanova et al., 2020; Selezneva & Lepeshkina, 2018):

- the difficulty in determining the personal risks of parties concerned, due to the fact that customers, as already mentioned, do not speak about them, which makes it necessary to conduct more in-depth study in this area;
- limited tools to transfer risks into consumer requirements for educational services, expressed in terms understandable to the university management;
- the difficulty in adapting measures to ensure customer satisfaction with APE in the context of a risk-based approach due to the lack of standardized procedures in management practice.

Nowadays, the quality management uses a wide range of tools and technologies are used to identify customer requests (questionnaires, the model of meeting expectations, critical incidents technique, SERVPERF etc.) (Bilgili & Özkul, 2019; Eliseeva, 2018; Ginting et al., 2018; Latino et al., 2020; Rasyida et al., 2016). However, most tools consider customer requirements as a homogeneous object of management, without subjecting them to structuring. At the same time, some requirements for educational services are not detected by traditional tools of collecting data, since customers practically do not speak about them. This fact is explained by the fact that the implementation of customer requirements for educational services provided by the university is taken for granted by students (Kelesbayev et al., 2020). The requirements (problems) related to the development of additional professional programs (APP) that are spoken about are not always clearly perceived by the university, as they are expressed through terms that have an emotional (everyday) rather than professional expression, which complicates the process of satisfying customers. The solution to this problem seems to be possible on the basis of adapting Kano model (Aliyu et al., 2019; Ginting et al., 2018; Ishak et al., 2020) and Voice of Customer method (Degtjarjova et al., 2018) to the subject of research.

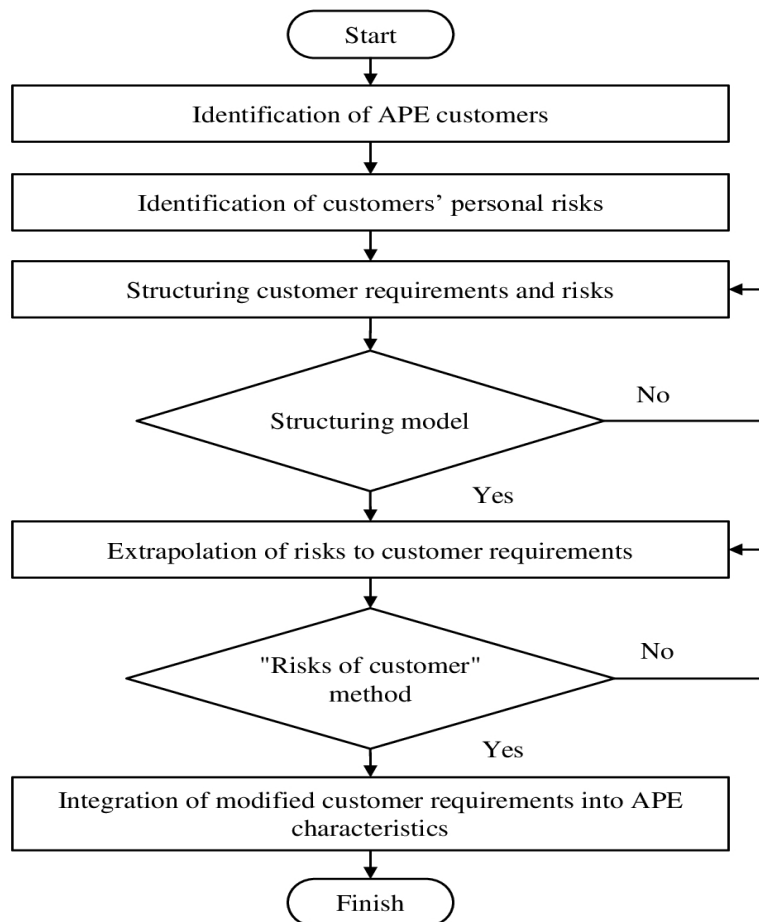
The analysis of publications shows that ensuring the satisfaction of parties concerned in APE in the context of risk-oriented thinking is relevant, since it allows to extrapolate risks to the requirements of customers and anticipate their expectations from educational services. Thus, study in this area is of scientific and practical interest.

#### **4. Purpose of the Study**

In order to eliminate the identified shortcomings in ensuring the satisfaction of customers with APE services in the context of risk-oriented thinking, it seems promising to solve the following tasks:

- structuring the requirements and personal risks of the parties interested in APE on the basis of adaptation to the problem of research of the quality model of N. Kano, which will expand the range of customer requests;
- extrapolation of customer risks in the characteristics of APE based on the "Risks of customer" method, which is a modification of the "Voice of customer" method;
- to integrate the procedure for extrapolating risks to the requirements of customers into APE QMS of a higher educational institution.

The procedure for extrapolating personal risks to the characteristics of APE services is shown in Figure 1. The implementation of appropriate measures in the context of the stated tasks will ensure and increase customer satisfaction with the services of APE.



**Figure 1.** Procedure for extrapolating risks (requirements) to the characteristics of an educational service

## 5. Research Methods

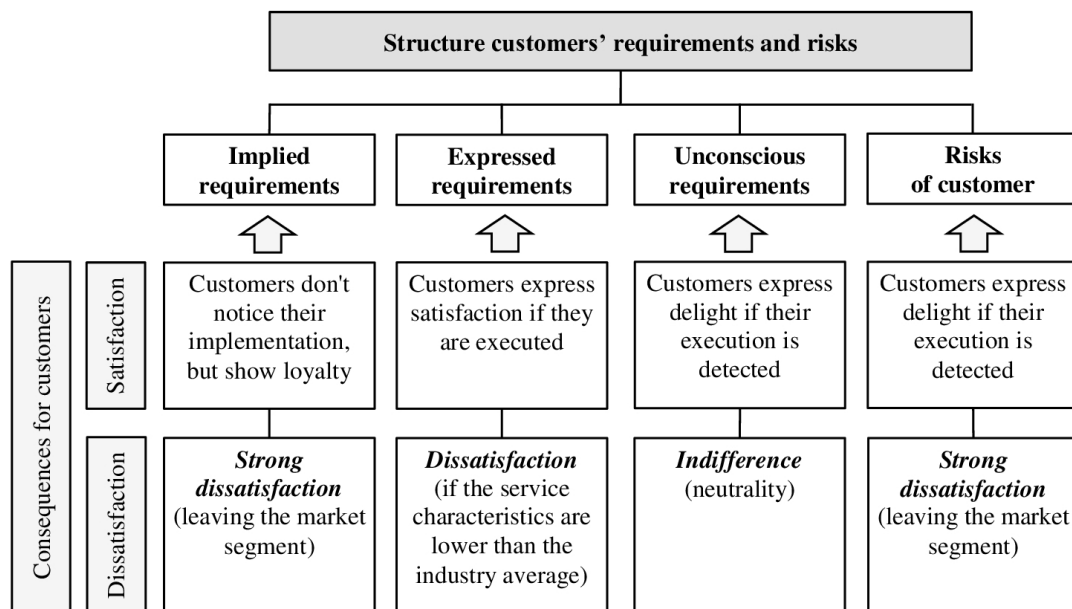
Within the framework of this study, it seems promising to use the following methods and approaches:

- quality management tools, in particular, modifications of the quality model of N. Kano and the "Voice of customer" method;

- a risk-based approach to ensuring customer satisfaction in the interpretation of international standards ISO 9000:2015.

### 5.1. Model for structuring customers' requirements and risks

Considering customer satisfaction as one of the criteria for the effective functioning and development of APE QMS of higher education institutions makes it necessary to develop a procedure for identifying personal risks correlated with the requirements for educational services. In this regard, it seems promising to develop a model for structuring the requirements and personal risks of customers, based on the quality model of N. Kano and allowing to identify the full range of requests from stakeholders and the consequences of satisfaction/dissatisfaction with the implementation of their expectations in the characteristics of products (services) (Figure 2).



**Figure 2.** Model for structuring customers' requirements and risks

The following assumptions serve as a starting premise for adapting Kano model in the context of risk-based thinking to identify consumers' personal risks and correlate them with the requirements for educational services:

1. Man is never clearly aware of what he wants. However, he knows exactly what he doesn't want. In this regard, problems (risks) that arise in the course of receiving educational services are identified using open-ended questionnaires.

2. Answers to questions are filled in by preserving user opinions, expressed in his own words, to ensure the reliability of the source data requirements (risks).

The application of the proposed procedure is considered on the example of identifying the requirements (risks) of enterprise employees interested in professional development for an additional professional program (APP) offered by the university.

## 5.2. Structure of customer requirements and risks

In accordance with Kano model, requirements are classified into implied, expressed, and unconscious, personal risks are also taken into account, which allows, depending on the current situation in the university, to choose a strategy to meet customers' requests and expectations from APE.

Implied requirements are taken for granted by the customer, and they are never spoken about (for example, compliance of an additional professional program with professional standards). However, non-compliance with this category of requirements causes great dissatisfaction of the customer. The identification of implied requirements must be done correctly, since if this category of requirements is not met, the university may lose its existing and potential customers.

Expressed requirements are the requests for services offered by the educational organization which the customer speaks about. A characteristic feature of detected requests is that they usually contain only some basic requirements (for example, the amount of hours, form of training, training conditions, etc.). If these requirements are met absolutely, the customer expresses his satisfaction, and, conversely, if they are not met, the customer is disappointed. Dissatisfaction occurs when the indicators of the educational service offered by the university are worse than the level expected by the customer, usually corresponding to the average industry level. Customer satisfaction increases if the values of the parameters of the educational service offered to them are higher than the average industry level.

Unconscious requirements are the presence of parameters of educational services that represent unexpected values for the consumer, the existence of which he does not suspect (for example, a practice-oriented additional professional program designed with the specifics of the customer's enterprise in mind). The absence of characteristics in products (services) that correspond to this category of requirements causes an indifferent reaction from the customer, and their presence in products is considered as "attractive quality".

Personal risks are problems (fears) that arise in the customer in the process of obtaining an educational service (for example, the risk of mastering a DPP that does not meet the requirements of the customer company). As a rule, such problems are never voiced by the customer. The lack of characteristics in educational services that can eliminate (reduce) the risks of the customer, causes him a sharp dissatisfaction and refusal to re-study in a particular university, and the presence of such characteristics – delight and desire to cooperate with the university in the future.

Study of problematic (risky) situations for the customer of APE is possible in the following areas:

- failures while mastering APP offered by the university (What problems do customers have when mastering APP? What is the reason for the failure that occurred with the customer when studying APP offered by the university? Does the customer always need to receive specific educational information to the extent that it is offered to them?);
- fears and anxieties (What is the customer afraid of when mastering APP?) etc.

In the future, the identified set of risks (requirements) of customers is structured in accordance with the categories of requirements based on the proposed model.

### 5.3. Extrapolating risks to the characteristics of educational services

Extrapolation of the identified set of requirements and personal risks of interested parties into the characteristics of educational services expressed in professional terminology that is understandable for the implementation of the university management is possible on the basis of the "Risks of customer" method.

The procedure for extrapolating customer risks to the characteristics of APE services can be presented as follows (Table 1):

- stage "Customer Risks" means identification of customers' personal risks associated with obtaining educational services within the framework of APE. At this stage, the requirements of customers for educational services are identified, which they formulated themselves, taking into account the problems they face when implementing it;
- stage "Task" is the offer a variant of changing (modifying) the existing characteristics of the educational service associated with the customer's professional problems;
- stage "Incongruity" means identification of potential inconsistencies that may appear in the already modified (modified) characteristics of educational services;
- stage "Characteristics of service/product" is formulation of a modified characteristic of educational services that takes into account the risks of customers and is expressed using professional terminology.

**Table 1.** Using "Risks of customer" method for additional professional program (document fragment)

Customer	Enterprise staff		
Product (services)	Additional professional development program within APE		
Customer risks	Task	Incongruity	Characteristics of service/product
Risk of studying APP which does not meet the requirements of the enterprise	APP development that meets the requirements of a professional standard and is approved by the enterprise	APP is verified, but not validated for the requirements of the enterprise	Validated APP that has passed professional and public accreditation

Integration of modified customer requirements into the characteristics of APE based on "Risks of customer" method allows the university to ensure the satisfaction of students from APE development.

## 6. Findings

The conducted studies have demonstrated that the proposed procedure for extrapolating personal risks of customers in the characteristics of educational services allows, in particular:

- to determine on the basis of the model of structuring the requirements and risks of customers the entire range of their requests for educational services of DPO provided by the university;

- translate the personal risks of customers into the characteristics of educational services expressed using professional terminology that is understandable for the implementation of the university management on the basis of the "Risks of customer" method;
- to ensure the satisfaction of DPO consumers even at the design stage of educational professional programs, eliminating (reducing) their personal problems associated with the development of such programs.

## 7. Conclusion

Increasing competition in the market for additional professional educational services currently requires the university management to develop and integrate tools and technologies to ensure customer satisfaction by APE QMS. A large number of tools used for this purpose are not always (or not fully) able to take into account the full range of customer requirements, including their personal risks associated with the development of an additional professional program.

In the context of risk-oriented thinking this problem can be solved by modification of such tools as Kano model and "Voice of customer" method. The procedure proposed for extrapolating personal risks to the requirements of customer, transferring them into APE characteristics, formulated using professional terminology, allows not only to meet, but also to anticipate the expectations of all parties concerned.

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