THE ROLE OF MARKETING RESEARCH IN DETERMINING THE EFFECTIVENESS OF PRESCHOOL EDUCATION IN CHILD DEVELOPMENT

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Abstract
In this research, the effect of preschool education on the future performance of the child and the importance of child coverage in preschool education for the society were studied. To this day, the impact of preschool education programs and attitudes of teachers and parents towards the child has been widely studied by several scholars, but we have reaped the impact of preschool education on the outcome of the child by comparing the children who went to and did not attend preschool in this study. The main objective of this research is to determine if pre-school education enrollment rate in Uzbekistan in 2018 amounted to 32 percent. This is a very low rate compared with developed countries. Therefore, we would like to make our own contribution to the increase of enrollment rate in preschool education through this study. In addition, we are going to explain the effect of preschool education on the future outcome of the child. The study put forward the hypothesis that preschool education is of high importance to the future performance of the child. In order to prove this hypothesis, marketing research methods and discriminant analysis methods were widely used. The results showed that the higher the grades of the child who went to preschool in the future stages of education, the higher the level of awareness, the greater the likelihood of an increase in his income, the higher the level of employment.

Further, we have a look at the tested possibilities of using the endorsed studies of selected foreign scientists in the pre-college education device of Uzbekistan on the premise of examine and evaluation of published clinical articles on the subject on the premise of technology Direct and Scopus. This research experience is recommended for states where there are problems associated with the development of pre-school education services market and especially those with low child coverage to school education.

Keywords: marketing research, preschoolers, preschool education service, the need for preschool education, demand for preschool education, quality of education, satisfaction of parents with preschool education, the effectiveness of preschool education, Uzbek parents

INTRODUCTION
The economic power of each country, the rise in the level of socio-spiritual life is determined by the competitiveness of the educational system, the progress of science. In line with the current concept of training, the development of pre-faculty training system, which is considered the initial stage for the improvement of training, is required. The main indicator that can assess the ongoing public policy on the development of preschool education is the level of coverage of preschool-aged children in education [Paulo B., and etc. 2016]. According to OECD data [OECD Family Database, 2018], the level of coverage of children aged 3-5 for preschool education in 2017 amounted to 100 percent in France and Great Britain, 98 percent in Germany, Italy, Spain, Korea and Japan, and in 2018 this figure amounted to 32 percent in Uzbekistan [ORDSQ, 2018].

As a result of the prospective reforms in the education system implemented in Uzbekistan, structural and structural changes are carried out in the pre-school education systems, modern educational services are introduced in this system. However, at present, the level of use of marketing research for the purpose of identifying the needs and desires of consumers for the organization of quality and affordable educational services in the pre-school education system, studying their views remains low [Sharopova N., 2018] in our country, there has emerged the need to carry out marketing research with a view to investigate the economic and social problems related to preschool education system, especially the development of the market of preschool education services. Because today’s consumers want from the pre-school education system not only to provide care and education to their children, but also to help their children to acquire modern knowledge [Peyton, V., and etc., 2001]. To try this, it’s far required from the heads of the group to have the understanding and capabilities of market and advertising and marketing, in addition to to carry out systematic advertising and marketing studies on the market of tutorial offerings if you want to meet the necessities and needs of its customers [Sharopova N., 2019].

The main task of Marketing Research is to provide accurate and objective information that reflects the real situation so that they can be carried out objectively [Naresh K. Malhotra, and etc., 2013]. The main reason of marketing research inside the pre-faculty education market is to offer feedback from mother and father approximately the first-rate of pre-school offerings, to evaluate the extent of pride and pride of purchasers with the first-rate of education, and to identify the want for promising instructional services, to research and expect the patron conduct hypothesis.

The development of a new economy based on the further development of modern knowledge in developed countries, in particular, has been given great attention to the pre-school...
Education system [Anne E. Day Leong, 2014]. Medical research has been achieved by many foreign scientists at the subjects of the impact of preschool education at the wonderful outcomes that a toddler can gain in the future [Victoria Hidalgo, and etc., 2018]. Additionally, the effective impact of key factors such as preschool training applications, the understanding and competencies of the lecturers in it, the status quo of together beneficial relations between parents and instructors in the academic system has been studied to increase the effectiveness of teaching and mastering to the kid [M. Caridad, and etc., 2016]. Because of the studies, it changed into determined that the child at the age of zero-6 years has obtained the knowledge and talents related to preschool education in order to lead those youngsters inside the destiny to finish their secondary school and higher education at an first rate level, increase within the stage in their employment and their destiny profits [Dietrichson J., and etc., 2018]. It is known from the studies that the organization of the educational and educational process on the basis of pre-school education programs leads to the effective formation of the first knowledge and skills in the child and an increase in the interest of the child to acquire knowledge in the next educational stages [Ikramov M, and et al., 2019].

Also, on the basis of pre-school education programs, the organization of education and training of the child not only increases the effectiveness of education, but also in these processes, the satisfaction of parents from preschool education is achieved. Due to the importance of parents’ satisfaction with the quality of education in increasing the adoption rates of children in preschool education programs, many studies have been carried out on the level of parental satisfaction from preschool education centers around the world [Sim Do., and etc., 2006]. As a result of this study, the situation of many developed states leading to greater productivity in the system of preschool education has been studied. For example, in OESD States in 2014 year, the rate of admission of children aged 3-5 to school in pre-school education programs reached 85 percent [OESD, 2019].

A number of scientific research works have been carried out on the subjects of pedagogy and psychology of preschool education in Uzbekistan. But to this day [until now], no scientific research has been carried out on the issues of marketing Research in the market of preschool education services and, more precisely, the study of the opinions of consumers of preschool education and the determination of their requirements. Therefore, we aimed to carry out scientific research work on the study of opportunities of foreign scientists to apply in the conditions of Uzbekistan from the perspectives of parents were significantly reduced [Daphna Bassok and etc., 2018]. Hyun-Sim Doh and etc., 2016]. As a long-term impact of early child care and education, it can be seen in the results of improvements in education and labor market performance [Ruhm, C., & Waldöefel, J., 2012]. Consequently, for the reason that effectiveness of pre-college training in growing the human capital is proved in the studies work, it’s far vital to broaden the pre-college training gadget in Uzbekistan no longer only for the further improvement of the instructional device, but additionally in all socio-economic spheres. To achieve this goal, at the same time, the school once again justified the need to carry out Marketing Research in the market of educational services. Because, the most effective way to reform any industry is to start with the implementation of this prospective marketing research [Naresh K. Malhotra and etc., 2007].

In the market of preschool education services, scientific research works on marketing research carried out for the purpose of studying their requirements and needs of consumers with the possibility of application of foreign scientists in the pre-school education system of Uzbekistan were selected and divided into the following 4 groups:

**The effectiveness of the curriculum in the organization of pre-school education services**

In developed states, the process of education and training is organized on the basis of various specially developed ECCE programs for preschool children. In all countries, training programs are significantly different from each other and are distinguished by their originality. These differences which seriously affect the development of the child and the wellbeing of the family are known to us from scientific research. In this case, of course, it is very important for parents to be able to choose the most suitable and developing educational programs for their education and development of the child [Daphna Bassok and etc., 2018]. International universal studies of assessing the impact of preschool education programs on Child Development universal preschool programs. The findings universal demonstrated that preschool education programs have a positive impact on all outcomes associated with the child’s secondary school grades, years of study, being educated in higher education, employment and income. It was done by Gina Bojorque, and etc. [2018] who studied exactly the effectiveness of the Building Blocks program in improving the effectiveness of preschool education and the findings showed that children who received education on the basis of this program had increased knowledge, led to further improvement of their memory and math skills. Similar research Hyun-Sim Doh, and etc., [2016] investigated the effect of RRPC program on child rearing for parents who have children of school age. The results obtained showed that the negative factors were optimized, and did not significantly affect the social abilities of children. For this reason, the RRPC parental program shows that it is effective in altering parental characteristics, which is known as important signs of Child Development. Victoria Hidalgo, and etc., [2018] believe that daytime ECCE programs lead to easy formation of social skills and behavior patterns. Additionally, research studied the impact of the new program on day care
on the quality of life, adaptation and development of children. The results showed that different aspects of the quality of life of children were improved, and also had a positive impact on other levels of adaptation and development, for example, social skills, internal problems and intelligence. Arya Ansari, Robert C. Pianta [2018] studied the issues of improving the relationship between teacher and child in the educational process and the findings showed that the age difference in the classroom is insignificant for the child to be well mastered. By way of the researchers, it became concluded that the expert improvement of preschool training that improves the coaching practice of instructors has a nice effect on the assimilation of the kid’s preschool knowledge, and the cooperation of the kid and the teacher in the method of preschool education, that is, the method “My teaching accomplice”, was proposed. Similar effective WISE project in preschool education system of Uzbekistan, SEN Educational Services, “Building Blocks” and RPSC programs and “My Teaching Partner” methods are used in the organization of preschool education process, the quality of preschool education shown in our country can be improved in the direction.

It is important not only the educational programs and the qualification of teachers, but also the continuous contribution of the child to preschool education to the improvement of the child’s results. Stacy B. Ehrlich, and and so forth., [2018] found that non-stop participation of the child in preschool schooling technique has been connected to the instructional performance of the kid and the results confirmed that it has also had a wonderful effect at the assimilation of preschool education and subsequent faculty schooling assessment. This means that not only should the child have a continuous participation in school and higher education, but also because the continuous participation in preschool education affects the child’s assimilation.

Another interesting study caught our attention. Who Is This Soohnwan, and etc., [2019] investigated the effectiveness of smoking prevention programs among school-aged children in South Korea, the study observed a decrease in the tendency to smoking among selected children. Of course, at this age, the appearance of a tick on smoking is very painful, of course. During this period, parents can spend more time with their children and at the same time be interested in what problems their children have, preventing the occurrence of such unpleasant situations.

**Ways to effectively organize preschool education services**

Let’s consider the directions of foreign scientists below, which should be given great importance in the organization of preschool education: Menon.A. Barriers [2013] studied the opportunities that parents could engage in early childhood education and the results showed that “parent participation” in education had a high impact on the quality of education of the child. Menon believes that fathers have troubles with handling their lengthy working hours and time, even as moms searching for to higher manipulate their time as a way to facilitate the training of their youngsters, because mothers are extra professional in this regard than fathers. Of course, I think that this finding will be trusted and supported by all parents like me. The process of choosing a preschool institution that is convenient for the child in all respects is a very important and extremely difficult task for parents. For this reason, most parents face similar problems in their education stages and are constantly in the fear. In order to help parents who have a similar problem, Daphna B., and etc., [2018] and Von Suchodoletz and etc., [2014] investigated the issues that the primary focus should be on in the management of preschool institutions and the evaluation of their role. Arya Ansari, and etc., [2018] again in their research, they reap the relationship between migrant parents and attitudes towards preschool education and their current problems at the same time. The main purpose of this research work is to assist parents in this complex and up-to-date preschool education process and such research will be of great importance to young parents, of course.

Cynthia Leung, and etc., [2019] studied the effectiveness of WISE Project in promoting the types of preschool education services and the effectiveness of education and the results showed that the problems and social behavior of children with regard to school readiness, behavior and also the cognitive skills of teachers had a great impact on the effectiveness of the educational process. Dana Charles McCoy, and etc., [2017] investigated the problems related to the study of the medium and long term effects of educational outcomes in order to enhance child coverage in early childhood education. The purpose of the study was to support the assistance of 3GCE in reducing the costs associated with education and improving the well-being of children. By Shui-fong Lam, and etc., [2019] for preschool-aged children with special educational needs, SEN studied the features and effectiveness of educational services, and at the end of the school year, the experimental group that used this educational service compared to other children with special needs cognitive skills, speech feedback, expressive language skills, large and small motor skills and self-management skills are relatively improved. Bastos, Paolo, and etc., [2016] in his study examined the issues of expanding access to pre-school education and increasing the role of private institutions in the coverage of children with pre-school education. The results showed that the volume of admission of a child to private pre-school education has expanded. This study can be seen as proof of the policies [scientific basis] carried out by our government. In Uzbekistan, too, the organization of private educational institutions was highly supported by the state, and this topical topic was raised to the level of Public Policy. The main purpose of this is to increase the level of coverage of the child in preschool education.

As another important aspect in the effective organization of the preschool education process, the relationship between the teacher and the educator is of great importance. Arya Ansari, and etc., [2018] concluded that improving the relationship between teachers and educators in their studies has led to an increase in the educational effectiveness of children. In another study, the impact of stressful situations on the individual and work-related children of the educator and his or her assistant were studied [Jean Lieng, and etc., [2018]. The results showed that it had a high impact on the social, emotional and behavioral activities of children therefore recommendations were developed by the researchers to prevent such situations. Educators-teachers play a key role in the development of social, emotional and behavioral activities of children at an early age. Because children at this age are very impressionable and their rapid adaptability is known to us from the conducted research.

As an interesting study on the effective organization of preschool education process, we can say that Katherine A. Magnuson, and etc., [2016] investigated the impact of preschool education programs on children’s cognitive and behavioral outcomes in relation to gender. The findings showed that the results of both male and female children were almost equally affected, and also did not affect the behavior of gender Children, the level of employment and education for adults.

**Studying the demand and supply for pre-school education**

In the period when the culture of providing educational services to consumers is developing day by day, the head of each educational institution will have to study the demand for pre-school education services that are available at the same time and in the future. An analysis of the scientific research of foreign scientists has shown that identifying the demand for preschool education and properly assessing it is a very difficult task [Walton Family Foundation, 2019]. Because of different circumstances in different states, the needs and demands of parents have changed depending on their satisfaction with the quality of education given to their children [Sharon Wolf,
2017]. Especially the type of pre-school educational institutions and the place of residence of parents greatly influenced the change in their requirements [Kelesidou, S., 2017]. J.Anthony and etc., [2008] investigated the problems associated with the assessment of possible demand, available demand and supply, and also gave an understanding that in the process of determining the demand and supply for preschool education, recording use of research methods and tools could achieve high productivity. Sam M. Walton [2016] explained the issues of forecasting the demand and supply that would be in the next 5-10 years for early childhood education. Sh.Wolf, and etc. [2017] studied the challenges of testing demand for preschool programs in Ghana. Sheldon Shaeffer [2015] developed policies and strategies to increase the demand for preschool education services.

In the process of studying the work of scientific research, the author raised the following problematic questions: when will the amount offered in the market of preschool education services increase? When does the demand for preschool education by people increases? Then how to increase the demand for preschool education services? The demand for pre-school education services can be achieved by increasing the satisfaction of parents from pre-school education. In order to provide accurate answers to these problematic questions, scientific research work on the study of parents' satisfaction from pre-school education services carried out to this day has been developed.

**Studying parents' satisfaction with preschool education**

In scientific research conducted to this day, it is noted that the level of satisfaction of parents with the quality of preschool education is different in different states [Nyland, B., 2016]. Parents play an important role as consumers in the organization of early childhood education and care, as well as in the continuous monitoring, evaluation and quality improvement of ECCE services [Hu, B., and etc., 2017]. John Fantuzo and etc. [2006] studied the levels of parental satisfaction from different aspects of early childhood education curriculum. As a result of the study, single parents and full-time employed, compared to the parents who could not participate in the education of their child, the parents who were married were more satisfied with the communication with the teachers. Ensuring parental involvement in the educational process by the author is based on the fact that education leads to an increase in efficiency and the level of satisfaction of parents. Eva Hujala, and etc., [2017] in the United States, Russia and Finland studied the views of parents and teachers on the quality of child care and education for children aged 3 to 5 years. The study was aimed at bridging the gap in ECCE research by examining how ECCE quality has changed in international circumstances over the past decades. As a result of the observe, it was concluded that if you want to improve the satisfaction of ECCE offerings and further develop it, extremely good attention must be paid to the cultural values in the society within the method of schooling and education.

Kelesidou, S and etc. [2017] examined the extent to which parents’ level of awareness and type of preschool institution influence on the satisfaction of parents from preschool education, which are considered as specific aspects of parents’ satisfaction with ECCE services. The results showed that parents with higher education received a less positive assessment than parents who did not have education. It was also found that the choice of private PSI of parents depends on their level of education, and parents with higher education try to choose more private educational centers. vi Ying Hu, and etc. [2018] studied the processes that predicted the satisfaction of Chinese parents with ECCE services and the study of its composition, and the findings showed that although the experience of teachers, the number of children and factors related to education constituted a large Foo on the level of parental satisfaction, the level of annual income of parents has a positive effect on their level of satisfaction with education.

From the research conducted on this subject, it has become clear that parents attach very high importance to every quality aspect of ECCE services compared to experts. As a result of the studies carried out by the Hu, B., Zhou, and etc. [2017], there is a difference between the assessments put on by specialist experts and parents, and parents have largely focused on the issues of language teaching, teacher-child, teacher-parent interaction in the educational process of ECCE programs. Jang, L. and etc. [2014] found that parents’ satisfaction with child care programs was mainly in seven areas. These include: program description, teacher description, interaction, curriculum, safety and health, physical environment and their evaluation. The results obtained showed that parents were satisfied with the present preschool education programs and the researcher stated that effective co-operation of parents and teachers in mutual education would lead to an increase in their further satisfaction from the quality of Education.

What results are expected from the introduction of the foreign experience of the above in the system of preschool education of Uzbekistan?

a. The call for and deliver for pre-faculty schooling will boom and the marketplace for pre-faculty training offerings, in this regard it’s going to emerge in a natural aggressive surroundings. In which there may be opposition, of course, the varieties of pleasant preschool education offerings growth. This, in flip, will result in the similarly development of the market of preschool education services in Uzbekistan.

b. The emergence of pure competition within the market of preschool offerings at once leads to an increase inside the satisfaction of mother and father from the best of preschool schooling, and within the method the demand for preschool schooling will maintain to boom.

c. after the implementation of stages a and v, the level of child coverage for preschool education in Uzbekistan is likely to increase from 32 percent to 100 percent.

What are the benefits of child coverage to public preschool education? What is the significance of preschool education for the upbringing of a child as a mature person? What changes occur in the future activities of a child who went to preschool? Within the process of the studies, comparable questions arose and we aimed to look for the answer to them by carrying out advertising research in the marketplace of preschool education offerings of Uzbekistan.

**Method**

For carrying out prospective marketing research, it is necessary to choose effective research methods and tools [Naresh K. Malhotra, and etc., 2002]. Then, low cost and low time are achieved in the research process, and it is also the most convenient way to achieve the intended goal, which is considered an important indicator [Naresh K. Malhotra, and etc., 2007]. In the process of research, data collection is the most complex and urgent task. After the practice of processing data and conducting analysis on their basis, the achievement of the intended goal and the expected result is of great importance. Most researchers therefore face these problems and often prefer to collect and process empirical data from specific sources [OESD and WORLD BANK] rather than making inquiries from respondents [Mustafafalkov, Sh.l., and etc., 2019]. It was not possible to obtain the following information of the respondents aged 25-60 years of Uzbekistan from electronic and reliable sources:

1. Degree
2. General work experience
3. How many years worked in the last place of work?
4. Average monthly income
5. Went to pre-school education (kindergarten)
6. Results of school education
7. Results of secondary special education
8. Results of Higher Education

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Therefore, as a result of the study of literature and on the basis of the advice of relevant professors in the field, a questionnaire was drawn up in the course of the study, adapting to the conditions of Uzbekistan. This questionnaire provides an opportunity for respondents to determine the results they have achieved during their lives based on accurate data. In June-August of 2019, social surveys were randomly received from 1098 respondents from all regions of Uzbekistan through paper form and online Internet sites (Facebook, Telegram, Odnoklassniki, Messenger, ). The respondents who incorrectly filled out the questionnaire were excluded from the list and the Social Survey results were based on the data of 930 respondents. Of the total respondents, 484 live in rural areas, 446 live in urban areas, 400 of the respondents were male and 530 were female. It was found that 157 of the respondents who participated in the survey did not have information, 404 had higher education and 369 had secondary special education. In total, 522 of the participants went to pre-faculty education the wide variety of folks who did not attend pre-college schooling became 368.

**DATA ANALYSES**

The results of the Social Survey completed by the respondents were analyzed using the SPSS 22 statistical software package. Based on the analysis, it was found out to what extent the impact of preschool education on the future performance of different groups of respondents and which factors are the main differences between them. The classification of variables according to the main factors determined by the respondents is presented in Table 1 below.

| № | Factors | Indicating | Classification |
|---|---------|------------|----------------|
| 1 | Not attended | y₁ | Non-attendance of a child in preschool |
| 2 | Attended | y₂ | Presence of the child in preschool |
| 3 | Income | X₁ | The average monthly income of the child at the moment is the sum in thousand sums |
| 4 | Level of degree | X₂ | The child’s educational attainment was found in three groups: higher, secondary special, and without education |
| 5 | Employment rate | X₃ | The employment rate of the child is determined in two groups: working, not working |
| 6 | Scores in School Education | X₄ | The School Education score of the child is determined in 4 groups: satisfactory, medium, good, excellent |
| 7 | Scores in Secondary Special Education | X₅ | The Secondary Special Education score of the child is determined in 4 groups: satisfactory, medium, good, excellent |
| 8 | Scores in Higher Education | X₆ | The higher education score of the child is determined in 4 groups: satisfactory, medium, good, excellent |
| 9 | Degree of non-resettlement | X₇ | Child experience indicators are obtained by years |

On the basis of the selected factors, A Discriminant Analysis was carried out using the SPSS statistical software package [Khodiev, B.Yu., and etc., 2019]. In Marketing research, mostly discriminant methods of analysis are used in the study of comparing different aspects between groups of consumers and the relationship between them. Discriminant analysis is used in marketing in such cases, in which one of the variables has a category [category], as well as independent variables allowing to evaluate variables with different intervals.

The function that is generated by determining the linear combination of the independent variable and is formed by dividing the associated variable into categories is considered a discriminant function and we represent it as follows.

\[ D = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + ... + b_n x_n \]  

(1)

Here:

- \(D\) - indicator of discriminant;  
- \(b\) - discriminant coefficient weight characteristic of independent variables;  
- \(X\) - independent variables;

On the basis of the function mentioned (3.1), variables with a certain classification \((Y)\) selected by calculating the discriminant indices are divided into different categories with respect to the variables \([X]\) with respect to each other. Conducting a discriminant analysis involves five stages:

1. Setting a goal, identifying independent variables;  
2. Calculating the coefficient of discriminant function;  
3. Checking the significance of the obtained functions;  
4. Checking the state of multicollinearity on the basis of correlation coefficients on the selected variables;  
5. Efficiency coefficient determination of result.

The results of the test on the significance of the collected statistical data and its relevance to the discriminant analysis are presented in Table 1. The tests evaluating the statistical significance of the selected variables in the discriminant analysis were determined according to Table 2. The value of Wilks’ Lambda statistics varies in the range \((0,1)\). If the value of the Wilkes statistics is close to 0, then this means that there is a good discrimination, if 1 means that the parsing feature is low, and the fact that the normal distribution of p-value in this case is determined by 0.05 degrees, confirms that the error is rare. In our example, the Wilks’ Lambda Test received different values on the selected factors. This situation indicates that the discriminant on the selected factors is not high.

F norm df\(1 = 1\) and df\(2 = 1489\) in observations, it is concluded that the effect of” p-value “below the value of 0.05 is assumed to be 3.86 table value, and that \(F(\text{real}) \geq F(\text{table})\) is” not related “to the observed variable result factors, if there is a strong \(F(\text{real}) \geq F(\text{table})\), then the effect of the factor In our
example, it was confirmed that all factors can be taken as significant factors in accordance with the F standard.

Table 2 Results of the group significance test

| Factors                        | Wilks’ Lambda | F      | df1 | df2 | Sig. |
|--------------------------------|---------------|--------|-----|-----|------|
| Income                         | 0.889         | 185.543| 1   | 1489| 0.000|
| Degree                         | 0.869         | 224.569| 1   | 1489| 0.000|
| Employment                     | 0.929         | 114.103| 1   | 1489| 0.000|
| Scores in School Education     | 0.756         | 481.880| 1   | 1489| 0.000|
| Scores in Secondary Special Education | 0.979     | 31.626  | 1   | 1489| 0.000|
| Scores in Higher Education     | 0.841         | 281.152| 1   | 1489| 0.000|
| Experience                     | 0.980         | 30.506  | 1   | 1489| 0.000|

To what extent are the functional correlations of the selected factors affecting the specified dependent variable, and to solve the problem of multicollinearity, a correlation matrix was established in Table 3. Since the correlation link between the factors adopted values close to zero, there is no multicollinearity problem in the middle of the selected factors, and it has been confirmed that the acceptance of all for the model is justified.

Table 3 The correlation matrices of factors

| Factors                        | Function |
|--------------------------------|----------|
| Scores in School Education     | 1.000    |
| Scores in Higher Education     | 0.821    |
| Degree                         | 0.627    |
| Income                         | 0.560    |
| Employment                     | 0.509    |
| Scores in Secondary Special Education | 0.399 | 0.210 |
| Experience                     | 0.206    |

It is determined that the associated variables with the selected classification are significant by evaluating the canonical discriminant function. When calculating and analyzing the coefficients of a discriminant function, the values of the functions obtained are required to be expressed as accurately as possible. We evaluate the mutual separation of variables related to in this on the basis of canonical discriminant. In our example, the coefficient of canonical discriminant received 0.570 value, the square of which is 0.32 and is based on the fact that it has 32% dispersion. So the connection is strong, and the correlation is satisfactory. The value of the indicator "Eigenvalue" is the ratio of the sum of the squares between the groups to the sum of the squares within the groups. This received a value of 0.481. This means that the difference in the middle of the groups means that the difference between the groups is higher than the difference between the two. This indicator is based on the fact that the difference between the identifiable discriminant functions is High (Table 4).

Table 4 Analysis of the canonical discriminant function

| Function | Eigenvalue | % of Variance | Cumulative % | Canonical Correlation |
|----------|------------|---------------|--------------|-----------------------|
| 1        | 0.481      | 100.0         | 100.0        | 0.570                 |

The above value of the canonical determinant function is confirmed by the Wilks’ Lambda test, and its value is equal to the coefficient 0.481, which bases on the fact that it is possible to conclude that there is a good discrimination. Wilks’ Lambda test results put the hypothesis that that preschool education has a higher impact on the future outcomes of the child than it does on the future ones.

Table 5 Test results of Wilks’ Lambda

| Test of Function | Wilks’ Lambda | Chi-square | df  | Sig. |
|------------------|---------------|------------|-----|------|
| 1                | 0.675         | 582.908    | 7   | 0.000|

Pre-school education is based on the hypothesis that there are differences in the future outcomes of the child with respect to high and has a high impact, it is possible to determine the extent to which each variable is of importance in the overall factor mark through two types of standardized canonical discriminant function and canonical discriminant function coefficients.
The standardized canonical discriminant function is as the follow:

\[ Y_1 = 0.370X_1 + 0.059X_2 + 0.365X_3 + 0.626X_4 + 0.237X_5 + 0.192X_6 - 0.247X_7 \]  

(2)

The canonical determinant function is the follow:

\[ Y_2 = 0.821X_1 + 0.627X_2 + 0.560X_3 + 0.509X_4 + 0.399X_5 + 0.210X_6 + 0.206X_7 \]  

(3)

Through the built model, preschool education is based on the hypothesis that the child has a higher impact on the future performance, and the type of child is a model that reflects the suitability of the child to the results achieved in the groups; however, what factors are more important to the child’s performance than the corresponding results. From the discriminant function it is known that the most significant as to the child's progress to preschool education, the factor is the degree of increase in the child's future income (0.821). It was found that the child’s work experience [0.206] as the most significant factor for the child to go to preschool.

According to the results of the canonical discriminant function calculated by the group, it was confirmed that the child received a decreasing (negative compared to the overall result) value on non-attendance to preschool education, non-productive, positive (higher than the overall result) on the child’s attendance to preschool education (Table 8). From this case it becomes known that the values of the canonical discriminant function, calculated by group, have a high degree of difference. There is also a great difference between the coefficients obtained from the fact that the child did not go to preschool and the child went to preschool.

The coefficients of the discriminant function on each group can be taken according to Table 9. The functions obtained make it possible to distinguish between the extents to which the parents have a significant influence on the type of preschool institution by each factor.

The coefficients of the discriminant function listed in Table 9 were obtained as follows:

\[ Y_1 = -24.583X_1 + 0.096X_2 + 6.916X_2 + 17.311X_3 + 5.83X_4 + 0.1904X_5 + 6.24X_6 + 0.35X_7 \]  

(4)

\[ Y_2 = -31.953 + 0.376X_1 + 7.062X_2 + 19.094X_3 + 6.53X_4 + 0.1904X_5 + 6.24X_6 + 0.35X_7 \]  

(5)

There are options for the use of separate derived discriminant functions on the determination of the high levels of the future results of preschool education of the child, the determination of targeted strategies for the coverage of the child in preschool education. According to the consequences of the feature, it became determined that the outcomes of the child who went to preschool training compared to the child who did not go to preschool school, they have a higher impact on the effects of secondary and higher school education component. Therefore, it was concluded that preschool education is of great importance in the further increase in the level of education and profitability of the child, as well as in the high level of school and higher education results of the child.

In relation to the child who did not attend preschool, the state of observations selected for the discriminant function analysis by all selected factors of the child who went to preschool education was 81.3% target classified, the results of the survey were reliable, and the observers almost all represented the covered state (Table 10). Hence, the reliability of the forecast is 81.3 percent.

### Table 6 Coefficients of standardized canonical discriminant function

| Function | X1  | X2  | X3  | X4  | X5  | X6  | X7  |
|----------|-----|-----|-----|-----|-----|-----|-----|
| 1        | 0.370 | 0.059 | 0.365 | 0.626 | 0.237 | 0.192 | -0.247 |

### Table 7 Coefficients of canonical discriminant function

| Function | X1  | X2  | X3  | X4  | X5  | X6  | X7  |
|----------|-----|-----|-----|-----|-----|-----|-----|
| 1        | 0.821 | 0.627 | 0.560 | 0.509 | 0.399 | 0.210 | 0.206 |

### Table 8 Canonical discriminant function calculated according to the group

| Factors   | Function |
|-----------|----------|
| Not attended | -1.208 |
| Attended    | 0.397    |

### Table 9 The coefficients of the discriminant function

| Factors   | X1  | X2  | X3  | X4  | X5  | X6  | X7  | Constanta |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----------|
| Attended  | 0.376 | 7.062 | 19.094 | 6.773 | 0.056 | -4.078 | -0.359 | -31.953 |
| Not attended | 0.096 | 6.916 | 17.311 | 5.404 | -0.320 | -4.352 | -0.313 | -24.583 |

### Table 10 Selected observations status classification for canonical determinant function

| Indicators | Variables | Comparative observations on selected groups | Total |
|------------|-----------|------------------------------------------|-------|
|            | Not attend | Attend | Not attend | Attend |
| In value   | 196 | 173 | 369 |
| In percentage | 53.1 | 46.9 | 100.0 |

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Based on the results of the carried out discriminant analysis, the following factors were analyzed that positively influence preschool education on the future results of the individual.

Table 11 A model for evaluating the effectiveness of preschool education services in increasing human capital

| Factors on discriminant analysis | Significance of the factors | Difference | Influence | Hypothesis |
|---------------------------------|----------------------------|------------|-----------|------------|
| $X_1$ - the fact that the child went to preschool $->$ degree of profitability | Importance | Available | High | Accepted |
| $X_2$ - the fact that the child went to preschool $->$ level of education of the child | Importance | Available | High | Accepted |
| $X_3$ - the fact that the child went to preschool $->$ the results of school education | Importance | Available | High | Accepted |
| $X_4$ - the child went to preschool $->$ results of secondary special education | Unimportance | Not available | Low | Not accepted |
| $X_5$ - the fact that the child went to preschool $->$ the degree of incapacity for work of the child | Unimportance | Not available | Low | Not accepted |

\[ EPE = I + LE + ER + GS + GHE \] (6)

Based on the results of the carried out discriminant analysis and table 11 data, the factors contributing to the achievement of high results in the future activities of the respondents were distinguished and the following model was formulated based on the results of the analysis on each group to measure their impact strength:

Based on the results of preschool education of Uzbekistan. Because there is no reliable source in our country where the results achieved during the life of the child are collected, as well as the process of education in PSEs on the basis of a certain preschool program has not been established for several years. Therefore, in consultation with the relevant Uzbek professors in the field, we decided to collect information on the results of the research from the respondents themselves, using the method of Social Survey, in the process of the child. Questions of the social survey, aimed at determining the results achieved by the child during his life, were drawn up and carried out on the basis of random selection throughout Uzbekistan.

The main objective of the study is to increase the level of child coverage for preschool education in Uzbekistan from 32 percent to 100 percent. To achieve the intended result, of course, it was based primarily on the discriminatory analysis carried out by parents on the fact that preschool education services are likely to have a positive impact on the outcome of the child. In the course of the research, the possibilities of using the experiences of foreign scientists selected on the basis of study and analysis of scientific articles published on the basis of the Internet from Science Direct, Scopus and web of Sciences in the framework of the above-mentioned topic in the pre-school education system of Uzbekistan were also studied N.R.Sharova [2019].

Based on the results of the research carried out, it is possible to increase the satisfaction of parents through the effective organization of preschool education process on the basis of universal preschool education programs in our opinion, which in turn leads to an increase in the amount of demand for preschool education. The increase in the amount of demand for pre-school education is of great importance in the increase in the cost of covering the child for pre-school education. As a basic conclusion from the study, it can be said that the child's participation in preschool education can be of great benefit to humanity and society.

Apart from the main conclusions, the following conclusions were drawn on the study of the impact of preschool education on child outcomes based on marketing research:

1. On the basis of Modern marketing Research in the system of preschool education of Uzbekistan is faced with many obstacles and problems at the tables of attracting budget and extra-budgetary funds in order to study the needs
and desires of its customers, determine the balance of demand and supply to the market of educational services, increase the range of quality educational services. Although many opportunities are provided by our government in this regard, the heads of educational institutions are not initiators. Because it is known that they themselves are not yet ready to organize paid educational services in an institutional and privatize an educational institution. These leaders are required, first of all, to have knowledge and skills in the field of educational marketing in order to formulate the educational services market.

In recent years, the demand for private non-public preschool institutions has been increasing dramatically. Because, private non-kingdom preschool institutions have a more advantage than public preschool establishments with various benefits, inclusive of the availability of quality education and education, the provision of high-level professionals, literacy and language teaching, the development of mathematical skills. Therefore, it is necessary to introduce advanced experiments of these private public preschool institutions even in the public preschool institutions.

It is known to us that in the process of preschool education, the opinions of parents, who are often the main stakeholders, are not heard. Therefore, all the research that should be carried out in order to improve the education system should be focused mainly on determining the parents’ requirements for preschool education, as well as on how satisfied they are with the quality of their education. All the questions and answer options of the Social Survey carried out in the pre-school education system are asked by parents in advance and the structure of the questions based on their opinion will directly lead to a further increase in the effectiveness of the education system.

Feedback on preschool education activities also makes it widely possible to identify their needs and desires without learning and dilemmas.

In the process of social inquiry, it is desirable to make extensive use of the online survey tool. Because there are several advantages of this questionnaire. The questionnaire is flexible, it can be prepared in different ways. It is also of great importance to carry out this questionnaire on the activities of preschool institutions online. Social polls Facebook, Odnoklassniki, Telegram and other allow you to conduct social surveys through social networks to a wide audience, that is, all over Uzbekistan at the same time. Through this, the researcher will not only spend less time and less cost, but the responses given by the respondents will also be collected in the Microsoft Office Excel table on the Google Drive available to the researcher. This makes it a great convenience for any researcher. This leads to low time and labor costs in the process of collecting and analyzing respondents’ responses.

From the conclusions drawn from the carried out research, we had been knowledgeable that that allows you to absolutely cover kids in preschool training, it’s miles essential now not most effective to boom the wide variety of pre-faculty academic institutions, but also to growth the pride of dad and mom from the nice of preschool training. The improvement of the elements that affect mother and father satisfaction with the fines of preschool training ends in an growth of their pride with the quality of training. This ensures an growth in infant coverage for preschool education.

It was found that the demographic characteristics (sex, data and income) and type of PSI affect parents’ satisfaction from the quality of preschool education. Therefore, these variables indicate that parents are important factors that determine their satisfaction with the quality of preschool education. In the next place, it was found that the characteristics of the class, the behavior of the teacher, the participation of parents in the educational process and the issues of interaction, safety and health are relatively important factors.

On the basis of factors accounting, which positively affects the satisfaction of parents from the quality of preschool education, it is recommended to the ministry and institutions in order to oversee the normative standards of an educational institution and privatize to further improve the quality of educational services, as well as to create a system of taking into account the At the same time, these researched research methods and tools can be widely used in the assessment of the activities of preschool institutions and in the processes of targeted strategic decision-making that allows them to increase child coverage.

REFERENCES

1. Anne E. Day Leong. (2014) Assessing the Cross-Cultural Reliability and Validity of a Measure of Parent Satisfaction Among Head Start Caregivers. Journal of Family Strengths: Vol. 14: Iss. 1, Article 22. Available at: http://digitalcommons.library.tmc.edu/jfs/vol14/iss1/2

2. Árya Ansari, Robert C. Panta. (2018) Effects of an early childhood educator coaching intervention on preschoolers: The role of classroom age composition.Early Childhood Research Quarterly, Vol.44, 3rd Quarter, Pages 101-113. https://doi.org/10.1016/j.ecresq.2019.03.001

3. Árya Ansari, Lilla K. Pinvick, Elizabeth T. Gershoff , Robert Crosnoe, Diana Orozco-Lapray. (2018) What do parents want from preschool? Perspectives of low-income Latino/a immigrant families. Early Childhood Research Quarterly, Pages 11. https://doi.org/10.1016/j.ecresq.2018.08.007

4. Bi Ying Hu, Yi Yang, Huiping Wu, Zhanmei Song, Jeniffer Neitzel. (2018) Structural and process predictors of Chinese parental satisfaction toward early childhood education services. Children and Youth Services Review Journal, Vol.89, Pages 179-187.

5. of https://doi.org/10.1016/j.childwld.2018.04.022

6. Bastos, Paulo & Sträume, Odd Rune. (2016) "Preschool Education in Brazil: Does Public Supply Crowd Out Private Enrollment?". World Development,Vol.78, Pages 496-510.

7. Messenger of https://doi.org/10.1016/j.worlddev.2015.10.009

8. Cynthia Leung, Janet Leung, Shirley Leung, Wally Karniokwicz, Effectiveness of the Whole Inclusive School Empowerment (WISE) project in supporting preschool children with diverse learning needs.Research in Developmental Disabilities,Volume 92, September 2019, 103433 https://doi.org/10.1016/j.ridd.2019.103433

9. Center for Business and Economic Research Sam M. Walton College of Business. (2016). Estimating the Demand for and Supply of Early Childhood Education in Northwest Arkansas. Report.

10. https://pdfs.semanticscholar.org/bf33/925e1662fed758b11869bf375311a0c599.pdf

11. Daphna Bassok, Preston Magouirk, Anna J. Markowitz, Daniel Player. (2018) Are there differences in parents’ preferences and search processes across preschool types? Evidence from Louisiana. Early Childhood Research Quarterly, Vol. 44, 3rd Quarter, Pages 43-54. https://doi.org/10.1016/j.ecresq.2018.01.006

12. Eva Hujala; Jannina Vlasov; Tünde Szecsi. (2017) Parents’ and teachers’ perspectives on changes in childcare quality in the United States, Russia and Finland. South African Journal of Childhood Education, Vol. 7, No 1, Pages 539 http://dx.doi.org/10.4102/saje.v7i1.539

13. Jens Dietrichson, Ida Lykke Kristiansen and Bjørn C. V. Nielsen. Universal preschool programs and long-term child outcomes A systematic review. November 23, 2018. Pages B3.
45. Sharova Nafosat Radjabovna (2019) Vozmojnosti primeneniya zarubежnogo opita v razvitii rinki uslug doshol'nogo obrazovaniya Uzbekistana. Regionale problemy preobrazovaniya ekonomiki, №8, s. 66-73.

46. OECD Family Database https://www.oecd-library.org/education/education-a-at-a-glance-2018-eag-2018-en. Labour and Social Affairs Updated: 04-09-2018. Chart FP3.2.F. Enrollment rates in early childhood education and care services and primary education by year of age, 3- to 5-year-olds. Percent of children enrolled in early childhood education and care [ISCED 2011 level 0] or primary education. [ISCED 2011 level 1], 3-, 4- and 5-year-olds, 2016 or latest available year.

47. Olga B. Savinskaya (2015) Roditel'skaya otsenka uslug detskogo sada: sennost vospitaniya l obucheniya [na primere g. Moskvi] Jurnal sotsiologii I sotsial`noy antropologiiT. XVIII. № 2. S.115-129.

48. O`zbekiston Respublikasi davlat statistika qo`mitasi ma`lumotlari. [Jitnjoy soha, holalar huquqlarli kafolatlariga oid minimal ko`rsatkichlar. Ta`lim. (12.10.2019) https://status.uz/]

49. Paulo Bastos and Odd Rune Straume. (2016) Preschool Education in Brazil: Does Public Supply Crowd Out Private Enrollment? World Development. Vol. 78, Pages 496-510. https://doi.org/10.1016/j.worlddev.2015.10.009

50. Peyton, V., Jacobs, A., O’Brien, M., & Roy, C. (2001). Reasons for choosing childcare: Associations with family factors, quality and satisfaction. Early Childhood Research Quarterly. Vol. 16(4), Pages 191-208.

51. Ruhn, C., & Walkfogel, J. (2012). Long-term effects of early childhood care and education. Nordic Economic Policy Review, Vol. 1 (1), Pages 23-51. http://norden.diva-portal.org/smash/get/diva2:702920/FULLTEXT01.pdf

52. Scopelliti, M., Musatti, T. (2013). Parents’ view of child care quality: Values, evaluations, and satisfaction. Journal of Child and Family Studies, Vol. 22, Pages 1025-1038.

53. Stacy B. Ehrlich, Julia A. Gwynne, Elaine M. Allensworth. (2018) Pre-kindergarten attendance matters: Early chronic absence patterns and relationships to learning outcomes. Early Childhood Research Quarterly Journal, Vol. 44, 3rd Quarter, Pages 136-151. https://doi.org/10.1016/j.ecrresq.2018.02.012

54. Soonhwan Kim, Heeyoung Kim. Effectiveness of smoking prevention programs for preschool children in South Korea at post intervention. (2019) Children and Youth Services Review, Vol. 101, Pages 80-86. https://doi.org/10.1016/j.childyouth.2019.03.042

55. Shui-fong Lam, Nancy Tsang, Yuen-Ching Keung, Ying Tong, Flora Mok, Amy Chiu, Yvonne Lai, Lily Yuen, Desmond Soh. A comprehensive service delivery model for preschoolers with special educational needs: Its characteristics and effectiveness. Research in Developmental Disabilities, Volume 85, February 2019, Pages 20-30. https://doi.org/10.1016/j.ridd.2018.10.005

56. Sharon Wolf, Edward Tsinigо, Jere Behrmаn, and J. Lawrence Aber, Alix Bonargeb. (2018) Testing and Scaling-up Supply- and Demand-side Interventions to Improve Kindergarten Educational Quality in Ghana. SIEF MidlReport.

57. Sharon Wolf, Edward Tsinigo, Jere Behrman, and J. Lawrence Aber. (2016) Estimating the Demand for and Supply of Early Childhood Education in Northwest Arkansas. Report. https://cher.ark.edu/www/supplydemandearychildhoodeducation.pdf

58. Sheldon Shafer. The Demand for and the Provision of Early Childhood Services since 2000-Policies and Strategies. Background paper prepared for the Education for All Global Monitoring-Report (2015). http://www.education2030-