

# Orientation of Target Audience to Selection of Engineering Specialization in Institutions of Supplemental Education

*Olga Aleksandrovna Moiseeva*<sup>1\*</sup>, *Olga Aleksandrovna Filippova*<sup>1</sup>, *Vladimir Gennadievich Ponomarev*<sup>1</sup>, *Irina Veniaminovna Polozhentseva*<sup>1</sup>

<sup>1</sup>Moscow State University of Technology and Management named after K.G. Razumovsky (First Cossack University), Moscow, Russia

**Abstract.** This article analyzes the issue of motivating parents upon making decision about selection of supplemental education in the light of importance of propaganda of engineering specialization as a factor of state competitiveness. This work is aimed at revealing promotional methods of motivating parents to select educational robotics as supplemental education for a child. The experimental methods are comprised of comparative analysis of approaches by child's robotics studios to promotion of engineering specialization among target audience and sociological survey among parents interested in educational robotics as a kind of child's engineering creativity. It has been revealed that most respondents are not aware of robotics as a program of supplemental education and of its global demand not at the game level. While searching for objects of comparative analysis, it has been revealed that numerous institutions of supplemental education are not inclined to implement robotics as an analog of engineering specialization into educational program not only due to expensive equipment but, first of all, due to unavailability of required specialists for arrangement of such child's engineering creativity. As a consequence of the comparative analysis of approaches to attraction of target audience, it has been revealed that numerous studios of R&D creativity pay insufficient attention to advertising of their companies due to moderate budget. On the basis of the experimental results, recommendations have been developed on organization of motivating communication campaign for studios of educational robotics with consideration for psychological and behavioral characteristics using available advertising tools.

## 1 Introduction

Nowadays the quality of engineers is a key factor of state competitiveness [1]. Development of engineering specialization in Russia is aimed at arrangement of conditions for personal enhancement of children and youth in Russia, formation of positive perception of R&D, researching and designing activities, stable motivation to master in engineering specialization, preparation of qualified engineers in accordance with existing demands of enterprises in Russia.

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\* Corresponding author: [schiso24@mail.ru](mailto:schiso24@mail.ru)

Peculiar role in professional identity of students on R&D and engineering sphere is given to supplemental education of children. This was reflected in the Russian Law titled "On education" [2], The concept of long-term social and economic development for the period up to 2020 [3], The concept of development of supplemental education [4].

This work is aimed at determination of promotion methods of parents' motivation to select educational robotics as supplemental education for a child. The authors assumed that the final decision to sign up for any classes was made by parents, they were the main customers. For successful motivation of parents, it is required to analyze their psychological behavioral pattern, to reveal their preferred communication channels used for selection of child's hobby. These data will be used further for selection of channels for data distribution to enterprises of supplemental education.

## 2 Methods

The opinion of modern advertising experts is that estimation of service quality of supplemental education by consumer is sufficiently subjective and depends on various factors: general-economic, cultural, social-psychological, social-demographic, personal-behavioral [5]. The services of supplemental education for children are acquired by parents depending on their wishes and requirements, as well as requirements by child, who plans to attend these or those courses. In order to reveal psychological behavioral patterns of parents, to analyze their information channels, sociological survey was carried out among 1,247 respondents. The following pattern was obtained: 80% of women aged 20-30 years – 34%, and aged 30-40 years – 47.7%. Mainly they were parents of boys (71%) at the age of 5-7 years (21.1%) and 7-9 years (47.7%).

While reviewing analytical and thematic sites, the market of child's R&D studios was studied. The authors analyzed advertising activity of BinomNewton child's studio of robotics, as well as compared approaches to promotion by competing companies (Polycent, League of Robots, BinomNewton) by studying histories of establishment of the companies and their recent participation in advertising communications.

## 3 Results

The performed survey has demonstrated that 68.2% of respondents gave priority to technical centers. 53% of respondents thoroughly considered the content of advertising leaflets. The respondents preferred to communicate with robotics studios online rather than personally. Most responses stated that communications with a studio were carried out using social networks: 37.4%, then, official site: 33.8%. Fewer respondents communicated by phone: 23.2%. The least popular variant was communication via office – 5.7%. Concerning participation in specialized events organized by the R&D studio, the most popular responses were free trial classes (62.6%), thematic master classes (58.1%), child's city camp on the studio basis (38.7%). In addition, the survey confirmed that 84.5% of the respondents recommended to their friends the services of child's studio attended by their child.

Therefore, the characteristic of target audience of supplemental education was determined, as well as the fact that the selection by parents and children could be controlled by advertising communications. The channels of data transfer or exchange used by the parents should be thoroughly considered.

The comparative analysis has demonstrated that the existing child's studios of R&D creativity developed differently and could be very successful irrespective of the number of attending children. Nowadays many parents select studios of R&D creativity for their children as a method of supplemental education, especially children's centers of robotics.

In addition, this study has demonstrated that child's studios of R&D creativity select various advertising methods for their services, promotion by domestic companies is insufficient for having impact on such target audience as children, since the preferred method is TV promotion and, sometimes, online promotion. Foreign brands generally combine both ATL and BTL promotion, which allows to attract maximum attention to such brand and to invoke desire to attend the classes with thorough insight into the company. Namely, BTL promotion of a company involved in child's R&D creativity can exert strong impact on motivation and behavior of consumers [6]. BinomNewton robotics studio operating for several years is not a large company and does not possess respective target audience, so it can be concluded that the services of the company are promoted by incorrect methods. Demand in formation of the company image in general explains the importance of searching for the most efficient methods of BTL promotion [7, 8].

Using the results of the sociological survey and comparative analysis, the authors selected the mechanisms of BTL promotion as the most promising nonstandard promotion for making contact with consumers [2], the importance of promotion by leaflets was demonstrated, as well as by such events as free master classes, trial classes, children's thematic meetings. As a consequence, a potential consumer could visually get acquainted with the services rendered by children's center, and not only to read but also to see, to touch, to try, and to understand at first hand, whether this was required to the child and whether this place was suitable.

This is confirmed by the fact that experts generally use the BTL promotion to stimulate decision making, creation of required images and associations, motivation of action, purchasing goods or services, and consolidation of certain action in memory of consumers. Correct analysis and highlighting of target audience are the basis of successful BTL promotion. Moreover, this allows to adequately, clearly and more individually approach potential consumer, which would significantly increase efficiency of advertising campaign [9, 10]. On the basis of the comparative analysis and the sociological survey, the project of studio BTL promotion was proposed.

## **4 Discussion**

The obtained results correlate with previously obtained data during studying focus groups of value orientations of parents upon selection of language schools [11]. Most participants of this study aimed at revealing of preferences upon selection of child's educational center and emotional features of responses to various patterns of advertising campaign, confirmed the importance of recommendations (by friends and relatives) concerning selection of language school for a child. Language school was selected by parents in terms of the following criteria (from the most to the least popular answer): distance from home/convenient access, professional level of teachers, modern and efficient learning procedures, price affordability. The authors believe that these results could be extrapolated to common approach of parents to selection of supplemental education for a child.

In another work [12], while determining the issue of promotion of youth R&D creativity, most of 1,196 respondents (58%) when answering the question "Are you interested in science?" answered "hardly ever", which explained lower popularity of scientific specialization among parents in the study. While answering the question about existence of R&D studios in schools, most answers were negative (83%). Let us not make hasty conclusions that the absence of interest to science was caused by unavailability of specialized studios in schools, however, this fact was also valid. In the case of availability of such R&D studios, 62% of the respondents in this survey answered that they would not attend them. This confirms the assumptions about insufficient promotion of R&D creativity mostly among parents as the decision-making audience, since the analysis of introducing robotics into

school and pre-school programs demonstrated that most respondents answered positively giving their consent with this proposal.

Enterprises of supplemental education require for renovation of personnel, which would help to solve acute issue of insufficient number of qualified experts in the field of child's R&D creativity [13-15]. At the same time, modern researchers believe that it is necessary to change approaches to promotion of various approaches to child's creativity due to changes in priorities both of governmental policy in the field of supplemental education of children and of parents [16-18].

## 5 Conclusion

Therefore, it is possible to substantiate selection of advertising tools of promotion. The mechanisms of promotion of educational services by handing out leaflets and carrying out various events, such as free trial classes, are economically efficient and promising on the long-term basis. However, it should be highlighted that in the course of sociological survey, quite numerous respondents informed about their negative or neutral attitude to leaflets, most of them even accepting a leaflet did not pay attention to its content.

On the basis of the experimental results, recommendations have been developed on organization of motivating communication campaign for studios of educational robotics with consideration for psychological and behavioral characteristics using available advertising tools. They include various procedures of arrangement of advertising communication depending on direct layout of advertisement and on target audience: ATL and BTL. However, one of the most efficient methods is application of such mechanism of communication with consumers as TTL, since it combines positive features of both procedures. As for the proposed BTL events, both children and their parents selected free trial class, focused event – child's garage-sale. In addition, it has been determined that the territory of BTL events will be parks in the same district as BinomNewton robotics studio as well as in the premises of the studio itself.

The authors plan to study modern opportunities of SMM promotion of services of supplemental education on the basis of such trends of the year 2019 as distribution of rapidly developing format of recent years: Stories. The recent analysis of peculiarities of social networks in Russia demonstrates that more and more brands commit their resources for promotion by stories of bloggers and influencers [19]. Officers of companies act as brand ambassadors, thus forming the required level of confidence to promoted product. Ambassador is perceived as a human impersonating the brand, being its alive advertisement [5]. This can be a promising method of SMM promotion of services of supplemental education, which can attract their teachers as brand ambassadors.

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