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ANALYSIS OF MUTUAL DIFFERENCES OF NEUROMARKETING ATTRIBUTES IN THE CONTEXT OF ACHIEVED CUSTOMER EDUCATION

ANALÝZA VZÁJOMNÝCH ROZDIELOV NEUROMARKETINGOVÝCH ATRIBÚTOV V KONTEXTE DOSIAHNUTÉHO VZDELANIA ZÁKAZNÍKOV

Abstract

The aim of the paper was to examine the differences between assessing the attributes of neuromarketing and customer education. The attributes "store information", "seller information" and "product information" were examined in terms of respondents' highest level of education. Data were obtained by the questionnaire method according to the Neuromarketing methodology. The established hypotheses were verified on a sample of 190 respondents through statistical analysis in the IBM SPSS statistical program. The established hypothesis was confirmed. The sample of respondents showed statistically significant differences in all three examined attributes of neuromarketing (store, product, seller) in terms of the highest achieved education of the customer.

Keywords

Customer education. Neuromarketing. Product. Seller. Store.

Kľúčové slová

Vzdelanie zákazníka. Neuromarketing. Produkt. Predajca. Predajňa.

JEL classification

M31, M39

Introduction

Neuromarketing, as a new area of marketing, examines customers' responses to individual marketing incentives by monitoring brain activity. It thus brings new research techniques with the potential to reveal hitherto hidden information in the human mind [1].

Neuromarketing is a scientific discipline currently practiced by a number of scientists and researchers working in the field of neurology and marketing. Companies invest their money in neuromarketing research to improve their market position and increase their profits. At present, investment in neuromarketing research is becoming almost necessary if a company wants to maintain its competitiveness. Despite the great benefits, however, the ethical issue of neuromarketing is causing a stir. Some researchers believe that it is neuromarketing that threatens the free and logical decisions of customers [2].

Neuromarketing allows us to understand the unconscious processes of consumers that can be used in marketing, ie. consumer expectations and motivation, predicting consumer behavior and evaluating the effectiveness of advertising. Neuromarketing combines psychology, neuroscience, and economics to study consumer behavior using neuroscience technologies to

understand emotions, consumer motivation, and then study how the brain is physiologically influenced by advertising and marketing strategies [3].

Emotions play an important role in unconscious decision-making. According to research consisting in the fact that groups of people with different phobias (fear of spiders, snakes) were presented with images of these animals for a very short time, their participants did not consciously register, but their physiological responses to these stimuli. He thus confirmed the theory of the influence of emotions and unconscious stimuli on other processes in the body [4].

By using the influence of emotions on the customer, marketing creates new tools with which he can influence him/her more. It looks at the customer as an "emotional being". During the decision-making process, emotions play a direct role in both unconscious and conscious decision-making. Emotions are the main motivation for human behavior [5].

The goal of neuromarketing is to obtain information about how the consumer's brain works during the course of marketing incentives. The advantage of this measurement technique is that the results are not affected by consumer prejudices or reluctance to reveal the truth. There is nothing wrong with using this technology, but the biggest problem is that researchers can look beyond the subjects they could designate for this testing. This is why the use of neuromarketing raises ethical concerns, which could be divided into two categories: the protection of consumer autonomy and the protection of various groups that could be harmed or abused by this research. The privacy of individuals involved in neuroscientific research conducted in medical institutions is usually protected by law. However, when neuroscience is conducted for commercial purposes, and thus outside medical institutions, protection by law loses weight and privacy is left to the moral values of researchers [6].

According to [2], neuromarketing is not based on pushing ideas into the consumer's head, nor is it used as a tool to force the consumer to buy, even if they do not even want to buy. Neuromarketing reveals what is already in our heads.

The ethical dilemma stems from the fact that the results obtained from research entities are or can be used to influence their responses (to promote sales, build promotional communication messages, etc.) without respondents being able to censor them. Another objection to these studies is that it suspects companies that potentially manipulate consumers in order to get them to respond or to respond favorably to an organization, regardless of whether the studies conducted have a purely educational purpose or are intended to thoroughly investigate consumers' behavior [7].

We believe that the operation of marketing tools created thanks to neuromarketing knowledge is also related to the level of education of the customer. In this context, it is then necessary to monitor whether customers with higher education respond to the attributes of neuromarketing differently than customers with lower education. This connection examined also [8] and partly [9].

[10] defines customer education as: „any purposeful, sustained and organized learning activity that is designed to impart attitudes, knowledge or skills to customers or potential customers by a business or industry. It can range from self-instructional material for a particular product to a formal course related to a product or service“.

Research methodology

The aim of the research was to identify and specify the differences between the assessment of the attributes of neuromarketing and the socio-demographic indicator - the achieved education of customers. For customer education, we took into account the highest level of completed customer education according to Slovak legislation, while for simplification, we took into account three levels (primary, secondary with high school diploma, higher education).

The questionnaire was created according to the Neuromarketing methodology - information about the store, information about the seller, information about the product. Within the methodology, we found out how the selected attributes of neuromarketing are related to the highest achieved education of the respondents. The methodology contained 30 statements, which were assessed on a 5-point Likert scale with a scale from 1 (certainly yes) to 5 (certainly not).

Attributes that the methodology contained:

1. store - an establishment in which some goods are sold or bought - a sale or purchase is concluded there. There, the customer views the submitted available goods, services with the potential intention to buy the best and most advantageous goods, service. The final decision of the customer whether to buy the goods or services may change in the store, so it is important that the customer feels comfortable there.

2. seller - a person who sells products or provides services to customers. Seller's main task is to serve the customer with the intention of selling goods and services. From the point of view of neuromarketing, the behavior and approach of the seller greatly influences the customer's decision-making during shopping.

3. product - a good or service that serves to satisfy needs and desires. Customers can build a strong emotional attachment to certain products, including through the neuromarketing links of their favorite brands.

Results

The following hypothesis was established in the research: We assume that there are statistically significant differences in selected attributes of neuromarketing in terms of customer education.

Using a Post-hoc comparison, we examined the differences in the attributes "store", "seller" and "product" within the highest achieved education of the respondents.

Based on the analysis of variance $F = 3.365$, **Sig. = 0.037**, we found statistically significant differences in the attribute "store" in relation to the highest achieved education (Table 1).

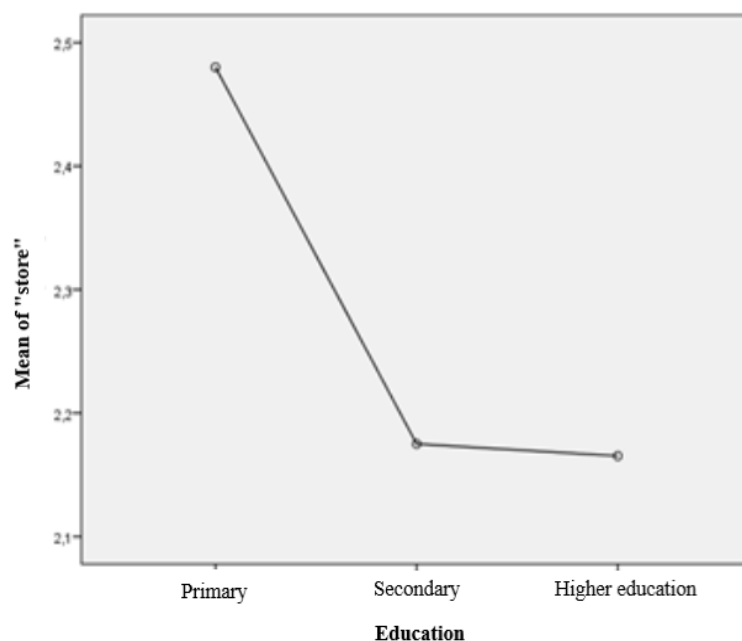
Tab. 1: Post-hoc comparisons in the store attribute in terms of customer education

Customer education	Customer education	Average difference	Significance
Primary	Secondary	0.305*	0.048
Secondary	Higher education	0.010	0.992
Higher education	Primary	-0.315*	0.033

(Source: own processing)

The "store" attribute recorded statistically significant differences between primary and secondary education and between higher education and primary education, always in favor of primary education (Graph 1). Respondents who have completed university and secondary education appear to be those who are less affected by the "store" attribute during shopping. Respondents with the highest basic level of education are more interested in lighting, pleasant smell and color design of the store interior during shopping. The brand and design of the product packaging are also important to them.

Fig. 1: Display of the store attribute in terms of education



(Source: own processing)

Based on the analysis of variance $F = 4.981$, **Sig. = 0.008**, we found significant statistical differences in the attribute "seller" in relation to the highest achieved education.

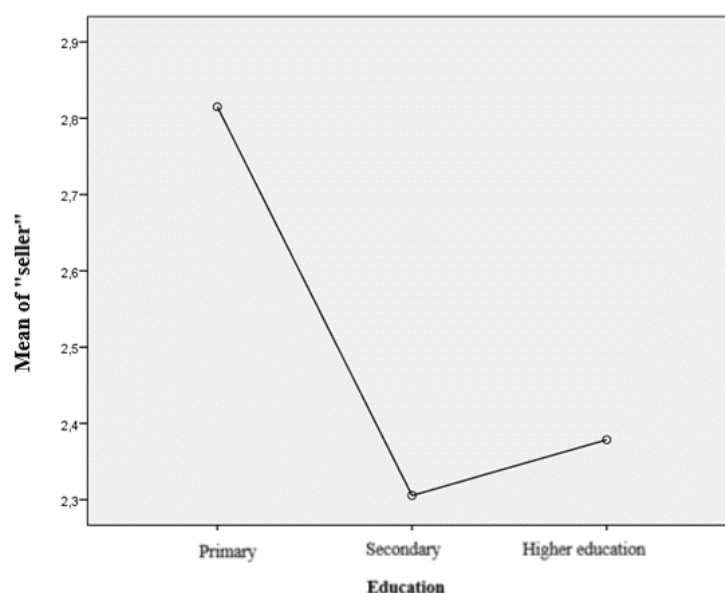
Tab. 2: Post-hoc comparisons in the seller attribute in terms of customer education

Customer education	Customer education	Average difference	Significance
Primary	Secondary	0.509*	0.006
Secondary	Higher education	-0.73	0.756
Higher education	Primary	-0.436*	0.017

(Source: own processing)

Table 2 and Graph 2 show statistically significant differences between primary and secondary education and between higher education and primary education. From these data, we analyze the result for the benefit of respondents with the highest level of primary education.

Fig. 2: Display of the seller attribute in terms of education



(Source: own processing)

Respondents who completed secondary education and higher education appear to be those whose appearance and the overall appearance of the seller is not so easy to convince. Respondents with the highest achieved primary education pay more attention to the physical appearance, cleanliness of clothes and the overall neatness of the seller. Their purchasing decisions are also influenced by their opinion, attitude, commitment and willingness to advise the seller.

Based on the analysis of variance $F = 3.476$, **Sig. = 0.033**, we found significant statistical differences in the attribute "product" in relation to the highest achieved education.

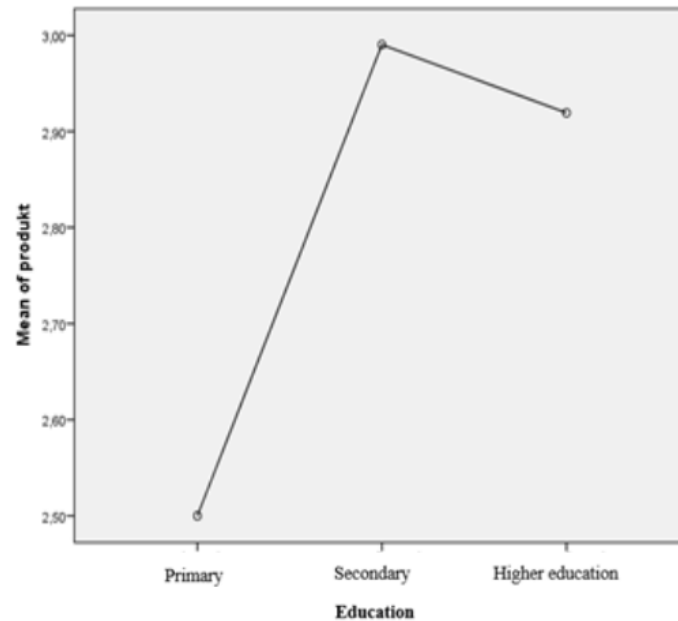
Tab. 3: Post-hoc comparisons in the product attribute in terms of customer education

Customer education	Customer education	Average difference	Significance
Primary	Secondary	-0.49028*	0.26
Secondary	Higher education	0.07089	0.812
Higher education	Primary	0.41939	0.058

(Source: own processing)

Table 3 and Graph 3 show the statistically significant differences between primary and secondary education in favor of secondary education. No other significant statistical differences in the evaluation of neuromarketing attributes in terms of the highest level of education attained were noted.

Fig. 3: Display of the product attribute in terms of education



(Source: own processing)

Respondents with the secondary education are more encouraged to buy discounts, sales, gifts, which they receive for free with a purchase and more often participate in competitions associated with the purchase of the product. In contrast to the respondents with the highest level of primary education, their attention will also be drawn to the event screened through the media.

The established hypothesis was confirmed. The sample of respondents showed statistically significant differences in all three examined attributes of neuromarketing (store, product, seller) in terms of the highest achieved education of the customer.

Discussion and conclusion

By examining statistically significant differences in selected attributes of neuromarketing in terms of the highest level of education attained, we found statistically significant differences in all three attributes - "store", "seller" and "product" in favor of completed basic education. Young people are generally very much based on their image, they have their role models, which they would like to emulate approach. They care more about how they feel in the store, how the seller treats them and the final product itself and its brand, which is most often associated with concepts such as quality, credibility, image, expression of personality or identification. We can say that customers with lower education are easier to accept marketing activities. On the contrary, respondents with the highest secondary education and higher education are not so influenced by these attributes.

Our findings are also confirmed by the research of [11], which states that "service firms have to be aware of the potential difficulty that may arise with educated customers".

As mostly young people have completed only basic education, we also rely on studies concerning them. According to the results of our research, we can agree with a study by Jones (2014), which found based on beverage products that young consumers will change the popularity of the brand through product promotion and discount. Respondents who bought products that were promoted by someone spent on average significantly more than

respondents who did not buy products related to promotion. In this case, the promotion required the purchase of a certain quantity in order to receive a promotional offer; 40% of respondents who used the promotion stated that they bought the quantity for the promotion.

Neuromarketing has a strong future because it provides information that we would never be able to find out with normal marketing methods. Furthermore, more companies are starting to use neuromarketing tools, and we think that this is not just a fashion trend, but that neuromarketing will become the main source of data and data for quality marketing campaigns. It is important to make sure that it is not about manipulating individuals or companies, but about looking for benefits on the part of both the seller and the buyer. We can consider more educated customers to be more demanding, so the use of neuromarketing tools is even more justified.

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