

# APPLICATION OF THE NEUROMARKETING CONCEPT IN AGRO TOURISM EDUCATIONAL ACTIVITIES

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**Abstract.** Neuromarketing is a new field of marketing that uses medical technologies such as functional magnetic resonance imaging to study brain responses to marketing stimuli or an encephalogram that measures brain bioscience that is highly accurate over time. In the sense of measurement, the reaction of brain to various stimuli can be seen with microsecond accuracy: image, sound, smell, touch. The application of neuromarketing in agro tourism is not manipulation, but a return to the consumer, their needs and the opportunity to get closer to the customers and, after satisfying their needs by the offered service to receive them again. *The aim of the research* is to find out the applicability of neuromarketing in agro tourism educational activities. In order to achieve the set aim, the expression of neuromarketing in the theoretical aspect will be analyzed, the instruments of neuromarketing will be briefly reviewed and the possibilities of neuromarketing applicability in agro tourism educational activities will be identified.

**Keywords:** neuromarketing; agro tourism; agro educational activities.

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## INTRODUCTION

**Relevance of the topic.** There is an increasing debate about the ability of the human brain to unconsciously support many vital or simply common processes. People's thinking takes place on two levels - conscious and unconscious, where ongoing thinking determines most purchasing decisions - (almost 95 per cent) - without even realizing it (Braidot, 2009; Dooley, 2011; Morin, 2011; Bastiaansen, Straatman, Driessen, et al., 2016; Ghuman, 2021). Based on the performed neuroscience research, it can be observed that when the colour of the packaging changes, the taste of the product can also change (Kalanta, 2016, Baker, 2021). Neuromarketing research, which began in the early 1990s, today enables to measure the basic consumer emotions and the accompanying physiological responses (Plassmann, Zoega Ramsay, Milosavljevic, 2011). According to Dooley (2011) and Stevens (2021), neuromarketing is a new field of marketing that uses medical technologies such as functional magnetic resonance imaging to study brain responses to marketing stimuli or an encephalogram that measures brain bioscience that is highly accurate over time. In the sense of measurement, the reaction of brain to various stimuli can be seen with microsecond accuracy: image, sound, smell, touch. Vaičiukynaitė (2016) points out that neuromarketing research methods enable not only research in the laboratory, but also in the physical and virtual environment. Neuromarketing helps create such brands that would cause the consumer one or another emotion, i.e., if a person who sees a certain product on the shelf and does not buy it that day, it will definitely remain in its memory (Vaičiukynaitė, 2016; Fabiano, 2020).

With the help of neuromarketing tools, organizations have the opportunity to gain a broader understanding of consumer behavior in the marketplace and their preferences when choosing products, services, or brands in abundance (Kline, 2004, Lewis, 2004; Ariely and Berns, 2010; Ghuman, 2021). The principles of neuromarketing could also be used by the tourism business, whose clients very often inquire about intriguing, emotional trips and excursions.

Tourism is a business of good emotions and therefore all tour operators try to make travel for tourists good emotions, great fashion, pleasant memories and so on. Using the principles of neuromarketing, tour operators could have a much deeper understanding of what elements, such as photos, colors, sounds, surroundings or even smells, should be used to create greater customer satisfaction, encourage customers to admire the tours, educations and deliver on their promises. Agrotourism is one of the types of cultural-rural tourism, for which the rightly chosen neuromarketing tools would allow to better understand the expectations of its client, to understand why the consumer makes such a decision and not a different one.

Since ancient times, people have been engaged in agriculture, but the urban and growing society usually has minimal knowledge of the farm, has never tested themselves in a rural environment, so agro tourism emerged as a way to discover themselves in the role of a farmer, try new activities, understand how others emerge products and even those made by them during their education. No research has been conducted in Lithuania to analyze the applicability of neuromarketing principles in agro tourism education, which is required by the current situation, when the Covid-19 pandemic led to a return to nature and the natural economy. The application of neuromarketing in agro tourism is not manipulation, but a return to the

consumer, their needs and the opportunity to get closer to the customers and, after satisfying their needs by the offered service to receive them again.

**The object of the research** is neuromarketing in agro tourism educational activities.

**The aim of the research** is to find out the applicability of neuromarketing in agro tourism educational activities.

In order to achieve the set aim, the expression of neuromarketing in the theoretical aspect will be analyzed, the instruments of neuromarketing will be briefly reviewed and the possibilities of neuromarketing applicability in agro tourism educational activities will be identified.

**Research methods:** analysis of scientific literature and other sources, systematization of information, graphic representation; qualitative research - a semi-structured interview using a questionnaire.

## **GENESIS OF NEUROMARKETING EXPRESSION THROUGH THEORETICAL ASPECT**

The term neuromarketing, first mentioned, was described as a method of using brain process identification techniques to understand consumer behavior in order to understand changed marketing strategies because it was understood that consumers could not explain their decisions based on rational principles. Something creates a strong psychological and emotional dependence on a consumer that affects the consumer on a subconscious level because a lot of chemicals are released in the brain, resulting in a sense of need. The released hormone dopamine causes euphoria, a feeling of self-satisfaction and well-being (Morgan, 2018). Neuromarketing science is significantly improving, changing, evolving, but its research remains the same - consumer motivation, emotions and their impact on consumer behavior, consumer brain sensory and motor functions, emotional and cognitive response to marketing stimuli (Morin, 2011). The present definition indicates that neuromarketing examines the response to marketing stimuli, thus substantially narrowing the field, and without ruling out the possibility of studying the brain response not only to existing marketing stimuli but also to discover new different ways to know, understand, and influence the consumer.

The most commonly used definition of neuromarketing is the application of neuroscience practices in marketing activities. Lee, Broderick and Chamberlain (2007), based on the concept of neuroeconomics, define neuromarketing as “an area of research in which neuroscience methods are used to analyze and understand human behavior in the marketplace and to promote exchange”. According to the authors, the definition provided has two implications: first, that neuromarketing takes precedence over neuro-image analysis, thus emphasizing not only the commercial gain but also the scientific nature of the discipline; second, the scope of research is extended from elements that exclusively cover consumer behavior to many possible aspects of attention. In examining scientific insights into the subject of neuromarketing, Plassmann, Zoega Ramsøy and Milosavljević (2011) emphasized that the concept of ‘neurosciences’ is too broad to be applied only to research on consumer behavior.

Neuromarketing is said to be a process of researching consumer brain imaging to reveal consumer responses to certain advertisements or products before creating or developing new advertising companies or brands. Many authors emphasize that neuromarketing is a new area of marketing that explores ways to identify brain processes by monitoring responses to neuromarketing stimuli (Bastiaansen, Straatman, Driessen, et al., 2016; Morgan, 2018; Fabiano, 2020; Ghuman, 2021; Stevens, 2021). This conception of neuromarketing as a process is more related to the scientific nature of the field, revealing the great potential of the discipline to evolve and evolve.

## **NEUROMARKETING RESEARCH INSTRUMENTS IN TOURISM ACTIVITIES**

The consumer of tourism services is looking not only for information about a tourism product or service, but also for social communication, emotional environment, entertainment, education, during which culture, traditions and knowledge about the production of various things or food dishes are acquired through practical touch. Therefore, the application of neuromarketing is also being tried in tourism activities.

Research on the application of neuromarketing in the tourism sector has not been found, but it can be assumed that tourists could participate in a study examining the reactions of tourists to early-stage educational activities, and attention should be paid to changes in tourist sentiment.

Thus, we can apply neuromarketing by studying the reactions of tourists to visible changes in the agro tourism environment, as a connection is established between the tourist and the object, using neuromarketing research tools (see Fig. 1).

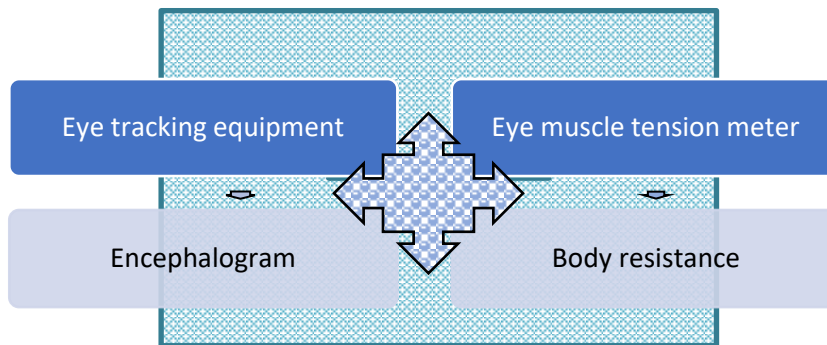


Figure 1. **Most commonly used neuromarketing research instruments**

The figure shows the four most commonly used neuromarketing instruments: an eye tracking device, an eye muscle tension meter, an encephalogram, and a body resistance meter. The most commonly used neuromarketing instruments perform a variety of processes, such as:

1. The galvanic reaction of the skin measures the electrical conductivity of the skin, which reveals short-term agitation. In marketing terms, skin electrical conductivity (high activity) is often associated with consumer need to buy (Nenad, 2011, Stevens, 2021);

2. Reaction time studies are performed, which are based on the measurement of the time required for information processing, i.e., measures the time between the moment a consumer encounters a stimulus, such as a question asked to him, and the consumer's response to it, such as the response provided (Lewis, 2004; Stevens, 2021). The version of the response time study used in marketing measures consumer attitudes and their strength (Kline, 2004);

3. Facial electromyography measures facial muscle activity, which is an indicator of emotional responses (Nenad, 2011; Stevens, 2021);

4. Steady state tomography makes it possible to measure changes in emotions and attention indicators over time, such as by observing advertising how attention and emotions change every second or as a storyline develops, whether there are places where attention rises or falls sharply, or how emotional cravings change. Bad state tomography has one distinctness compared to an encephalogram: this method additionally allows the measurement of stimulus coding in long-term memory, such as what scenes are seen in advertising and how strongly users are remembered (Nenad, 2011; Stevens, 2021);

5. Using magnetic brain examination, it is possible to monitor blood flow in the brain and identify active areas. The advantage of the method is spatial accuracy, which allows to determine certain areas of the brain, but this method is not suitable for accurate time determination, so functional magnetic resonance imaging cannot be used to evaluate the effectiveness of TV commercials in seconds (Ariely and Berns, 2010).

Ariely and Berns (2010) and Stevens (2021) explain what unique encephalogram neurotransmissions can help solve unique marketing problems that cannot be solved with conventional methods. There are two areas of application: testing of newly created promotional material before the start of the campaign and testing of product packaging prototypes. The aim of testing advertising material is to find out whether the created advertising will be able to fulfil the tasks set during the campaign, such as whether the video attracts and retains the viewer's attention, involves the viewer and closely follows the story reactions are caused by how emotions change as the plot evolves, whether the visual elements of the brand attract enough attention and positive emotions, and so on. Most importantly, pre-campaign advertising results can show which advertising scenes, images, colors are not performing well enough, and provide insight into what to do with minimal editing effort to improve the impact of advertising - to engage viewers and get emotional engagement.

In summary, in some cases, neuromarketing, more precisely than surveys, can help predict consumer behavior. The application of neuromarketing principles reveals new perspectives on the management of consumer habits, which can have both positive and negative psychological consequences by stimulating the individual's brain with emotional stimuli that force the unconscious formation of specific consumption / buying habits. It is also important to emphasize that traditional marketing research remains

relevant and important, and combined with neuroscience research methods, would help to reveal even more information about consumer motivation, emotions and their impact on consumer behavior.

### NEUROMARKETABLE APPLICABILITY IN AGRO TOURISM EDUCATIONAL ACTIVITIES

The purpose of this article was to find out if agro tourism educators are aware of neuromarketing, as it should be noted that they all use traditional marketing tools to publicize their service, attract customers, engage and retain them. 7 agro tourism educators with different educations were purposefully selected. No neuromarketing tools were used in the study, but in the first stage the aim was to find out whether the selected respondents intuitively or purposefully apply neuromarketing elements in their educational activities. A structured questionnaire was used during the survey, but the respondents participating in the survey were also asked clarifying questions in order to analyze the issues of concern as deeply as possible. The questionnaire contained five questions that were supposed to provide detailed answers about the awareness of neuromarketing and the influences of colours, smells, interior-exterior on client behavior during and after educations.

Respondents represent agro tourism educations as follows: cheese production and butter beatings, wine-making traditions with tasting, poultry and exotic poultry farming and scrambling eggs, cannabis cultivation, production and oil tasting, bread baking, honey farming, medicinal plants and medicinal tea tasting. All respondents in the study have been engaged in agro education for three years or more, accepting both individual and group tourists of different ages, i.e. children's groups, adults' groups, and mixed groups. All respondents have their own websites, have participated in tourism exhibitions in Lithuania, Latvia or Poland, as they named them as the main users of their service. Duration of agro educations from 2 p.m. until 5 p.m. Longer educations include meals (lunch or dinner) with the opportunity to communicate with each other.

In their activities, neuroscience research methods can reveal more information about consumer motivation, emotions and their impact on the behavior of users of education. As for the application of neuromarketing as a marketing application of neuroscience research (functional magnetic resonance imaging, electroencephalography (EEG), eye-tracking), it is mainly used by the world's largest companies: Google, Microsoft, Disney, Hyundai and Coca-Cola, which have separate consumer behavior analysis departments responsible for continuously understanding consumer behavior and researching customer reactions to their products or advertising.

The first question sought to find out was how important the environment is for service users during their education and what elements emphasize the distinctiveness of agro tourism education, which attracts the attention of tourists. Research participants believe that the environment is important: "...the uniqueness of the environment helps retain and attract new customers ..." (Respondent 3); "...a clean and cosy environment, where education is led by a thematic character, makes them feel welcome and involves them, evokes positive emotions ..." (Respondent 2); "... details are important for creating a specific environment, such as mirrors, antique educational devices ..." (Respondent 1); "...they must be clean, it is very important that there are no unpleasant odours yet, no matter that it is a rural environment, but you can't smell manure directly ..." (Respondent 5); "...it is important that all things in the environment are used so that visitors can touch, test how it works. This is perhaps the main thing in education, because you cannot perceive that activity differently ..." (Respondent 4); "...my education takes place in a natural environment, it is important that visitors can sit safely and comfortably, but not on modern design chairs, but on the pranks of nature, but it must be transparent so that it does not obstruct nature, so that there is a feeling that nothing exists ... well, it is still necessary to mow the site in order to be tidy ..." (Respondent 7); "...I have a specially equipped educational space, I consulted and twisted specialists in that field, all in such a way that the educational processes are all passed through in a consistent manner, so as to ensure security so that not everyone is overwhelmed ..." (Respondent 6). Thus, summarizing the answers, *it can be stated that the environment itself and its uniqueness for the conduct of agro tourism education is important and, based on the concept of neuromarketing, can help to form a positive impression of education. Respondents mentioned such important elements of the environment as cleanliness, which was described as a good physical environment, clean clothing for educators and personal hygiene, no unpleasant odours, naturalness, (nature). Another element of the environment is the details in the environment: mirrors, authentic items, security, natural elements, rain / wind protection.*

The analysis of the importance of the environment also highlighted the importance of the qualifications of the staff leading the education: "...the character must be very empathetic to the topic, just

live in it ..." (Respondent 2); "...you can get all kinds of questions and then no environment will save you if you don't know what to answer. ... Everything happens, with each group you keep improving, but you have to be able to get away with it, not to show fear ..." (Respondent 1); "...a professional must be in that environment and warm it up, because immediately visitors feel it ..." (Respondent 3); "...well, when you sincerely enjoy your activities..." (Respondent 7); "Educators should be nice, with a smile on their face, because that's when people came to enjoy their free time ..." (Respondent 6); "...the environment is strongly influenced by an employee who knows his job well and who knows everything about the objects in the environment, how they work ..." (Respondent 4); "... the educator must greet the clients in a good mood, in a positive mood, weave even some witty jokes or sayings and tell about the flats themselves so that they understand what beekeeping is, because it's not just honey, but the whole philosophy ... patience, because many questions, some are repeated ..." (Respondent 5); "...creativity is also important in serving tourists, they must not only know their job, but also use their creative abilities, because not only does the surrounding environment create a sense of cosiness or anticipation, but the educator also makes a big contribution ..." (Respondent 4). *Summarizing the answers of the respondents, the category "staff" was singled out, with subcategories: professionalism, positivity, patience, creativity, empathy.*

Neuromarketing indicates that colours are a very important element in attracting customers to create a specific environment. In the "Colours" category: "...colours in the environment should not distract ..."; "...in the environment, the colours should radiate heat, the light pastel colours are prevalent in nature ..."; "A quiet environment in agro tourism is simply obligatory, as it allows you relax and merge with the environment, immerse yourself in it ..."; "...no one should be distracted here, because you are with the bees, and they feel everything, we even recommend to tourists in pastel colours ...". Only one respondent mentioned that bright colours such as "...bright red or intense yellow and green can be useful in a branded store, when after education participants can buy branded products ... then pastel colours can also put one to sleep. The source of income is lost ...". The agro tourism educator, who set up the educational space with the designer, mentioned that "... we paid a lot of attention to the combination of colours, we have an intense olive, pink and light blue colour. It shows warmth, customer expectations, and at the same time attracts attention, but calmly, unobtrusively ...". Thus, subcategories were singled out in this theme: light pastel colours, intense red, yellow and green, colour combinations: intense olive, pink and light blue, natural colours. The application of neuromarketing in the field of colours will not significantly change the consumer's moods, as they reflect the subjective state of the consumer, while the user's emotions, characterized by short-lived colours, can be aroused. For this reason, changing a consumer's emotions is fairly straightforward, as is changing their behaviour in the same way. Neuromarketing can help create brands, products, packaging, or even a physical environment that evoke one or another emotion in the consumer. In other words, if you see a certain product on the shelf, you will not buy it that day, but it will definitely remain in your memory. This also applies to the educational environment, i.e. the environment can remain in the memory for a long time, thus allowing to remember the education itself, which is what it aims to do: to provide knowledge about certain agro activities.

*Summarizing the research data on the impact of the environment on agro tourism education, it can be stated that the environment is important for all respondents, as it can determine the attractiveness and success of the company, and the elements that matched the answers of all respondents apply to all companies. Both cleanliness and detail and professionalism of the staff in various aspects are important in agro tourism activities, and the colours give an enhancing effect to the emotions of the customers.*

**The aim of the study** was to find out how clients react to the conducted agro education through the demonstrated reactions. Respondents say that customers' reactions are varied, because it is very important what kind of mood tourists come in, whether it is voluntary or forced by parents or teachers, or maybe the head of the company ordered it because he found it interesting, but did not listen to the whole team. Emotions are most often displayed: surprise, admiration, satisfaction, enjoyment. Respondents openly stated that sometimes there are negative reactions: indifference, boredom, the desire to provoke conflict. This is illustrated by the following quotes: "produced by the elders ...", "they're just omniscient ...", "... mom, let's go faster, I don't like it here ...", "...although gifts or personal attention sometimes help ...", customer expectations are strongly influenced by their expectations.

The first thing that betrays a customer's (in)satisfaction is the expression on his face when he's just crossing the door. You can see curiosity in their face, and you can also see boredom, apathy ..., then you don't understand why he is here at all ...". Positive emotions are described by: "... satisfaction, pleasure by activity is given by a radiant face with a smile, as the eyes burn ..."; "... after the education, the tourist, having purchased the product in the branded store, inspects it, tells others with joy who he will bring it to as

a waiting room or how to taste it with friends ..."; "... reactions usually depend on the expectations of customers, which are often formed by tour operators, who may misinform the tourists, because not all those managers are with us, the expectations are reduced, it is 100 per cent of satisfaction..."; "...when children see butter crumbling, they do not believe in surprise with their own eyes ..."; "...everyone likes to bake bread, and when they eat afterwards, they can even take it home - everyone is fascinated...". "...their reaction also depends on the price, so we try to differentiate the price, so we have individual, group, VIP offers, although experience shows that everyone would like a VIP offer, because everything is of the highest quality..., everyone constantly asks for discounts, sometimes we give, sometimes not..."; "...reactions depend on how you advertise your products, usually most customers are surprised to see something new, so when they advertise a product well, they are interested and want to try it...", "...when you offer something individual, you say that it is only for them, everyone remains very satisfied, customers will know that they may receive special offers in the future, which will encourage their satisfaction and positive reactions..."; "Clients' reactions, if we speak together, depend on the client's personal characteristics, character, because there are those who are always dissatisfied with everything...", "...keep coming back and staying happy every time and telling others that it was interesting here, well, that they learned a lot, because they want to be caught as and from what our products come from ...".

*Summarizing the results of the study on the category “Customer Reactions”, two groups can be distinguished: positive and negative, which are often determined by customer expectations, if they are satisfied, respectively, reactions that can be expected to be positive or, conversely, negative, and depend on personal features / character, mood, price of service, focus, special offers or service upgrades. Advertising that emphasizes the uniqueness of the service is also important.*

Marketing research shows that the first impression is formed only in 7 seconds, so during the research it was important to find out which respondents' visual elements attract or repel consumers' gaze during the first contact. Respondent 1: "...many things attract the attention of customers, one of them is what the homestead looks like, because it is seen in the first place, so it is important what environment, cleanliness, whether there are flowers or mowed..."; Respondent 2 "...customers pay attention to the appearance of a welcoming educator, if he looks messy, automatically loses confidence and disappears positive reactions, the service will look inferior, in which case customers will not have much desire to snag or buy something in the branded store...". Respondent 3 "...we often meet customers with adventurous accordion music, it all starts to smile right away, when something even starts to rhythm, it's like creating the first good emotion, i.e. almost half of the work has been done...". Respondent 4 emphasized that "...the most important visual element that creates a strong first impression is the gate, it should attract attention and create a strong first impression. The professional work of a blacksmith ensures a strong impression, it is like a logo - you saw and remembered, because I have not even seen more beautiful and impressive ones myself..., authentic and ancient signs that make people feel closer to history, ancestors...". According to Respondent 5 "...the most important thing for me is confidence when you go out dressed in a chicken costume - everyone starts smiling, and when you hand out cherry costumes to all participants, when you even laugh out loud, you have a hat, take pictures..., ...yes creates that first effect... ", and Respondent 6 mentioned "who welcomes guests with a drink, bread and salt, which also makes them feel good". Respondent 7 mentioned that "... good mood is important, we like it sometimes, sometimes we play music, and sometimes, especially in winter, when we agree, it is smoked with lavender or cinnamon on the premises, ..., everyone likes elements that would be repelled by the respondent". In the eyes of consumers, it is "...an orange that resembles links". Thus, the first positive impression is formed by: tidy physical environment, cleanliness, cheerful music, pleasant smells, visually striking artistic elements, educator's clothing corresponding to the education, feasting. All of these elements are very important as they can have an impact on customer opinion formation and satisfaction, as well as feedback on agro tourism education, as it creates an overall impression and shapes an opinion about the service.

The tourism business uses online tools to increase sales of services, which are also based on the principles of neuromarketing. The study sought to find out whether agro tourism education also benefits from it. Respondent 1 stated that "...one of the most important things on the Internet is the quality of photos, because he says that he can take photos with the phone himself, but no, it's not such an angle, it's lacking lighting, it's brightness, ..., and everyone wants beautiful images now, it's not the time when you could put anything ...". A similar opinion was expressed by Respondent 3 "...I arranged my page, I hired a professional photographer so that everything would be properly photographed, retouched, focused, well so that the mood felt good, the colours would be highlighted..., even it looks beautiful to tourists...". Respondent 2 states that "...hooking text is important on the Internet and if it's not too long, because lazy people read it now, it's still

beautiful photos, that's fine". Respondent 4 "...I have a lot of tourists from Latvia, all the texts are not only translated into Lithuanian, but also into Latvian, they really like it. I live near the border, I know Latvian well, it was easy for me to do it, and the clients are happy about it... Quality is needed everywhere, good photos are needed to make the sunset, to create a mood of colour...". Respondents 5, 6 and 7 also emphasized the same elements: the quality of the photos (brightness, lighting, shooting angle, retouching, colour). It should be noted that the languages in which the texts are presented are also important and the quality and optimal length of the texts themselves should not be forgotten. The summarized results of the study show that short videos are also important, which create emotion and allow a better understanding of the educational process, but the respondents noted that "...the page does not catch those videos, it gets stuck, which annoys customers. I saw that they did not stop watching them and closed the page and did not see anything at all ..." (Respondent 3); "...those movies are not expensive, I didn't do it, but I have to not only film it, but also make it sound with quality text and voice..., ...everything costs... I would really like it, but maybe in the future, too much cost too this pandemic, ...I will not engage in..." (Respondent 6). "Video is good advertising, ...if I went not only to the Internet, but also to the television, but everything is based on big money..." (Respondent 7). "It suits me online on FB and Instagram, kids are quick to get everything there, all the news, special promotions that are very appealing to customers. I can't say that only promotions work, but they attract, and via the Internet, it can reach that customer very quickly..., we are still announcing a competition - people are very actively involved and then the awareness only increases..." (Respondent 2).

*In summary, neuromarketing is also used in the online space, where it is changing and evolving quite rapidly. The reason for this rapid change is the extremely fast response of the user to the content provided to him and the paramount importance of the content. One photo can result in twice as large or smaller orders. According to research, people make as many as 80 per cent of buying decisions in a physical store standing on a shelf, in the digital space - 100 per cent. At the same time, making sure which colour, photo or text will get more user attention can be instantly based on clicks or sales. In the online space, this area is commonly referred to as user experience (UX).*

It should be borne in mind that the methods of neuromarketing used in e-commerce are mostly based on the basic psychological biases of humans and the principles of influence that flow from them. The online platform can create the illusion that the user experience (UX) is designed to make the best and fairest decision when you choose and order a service, using the strongest principles of psychological influence that reinforce positive emotions, service photos or quality promotional videos. It is also possible to create a situation of limited supply, to include positive feedback from other users, comments that are reinforced with hearts raised thumbs, and so on. drawings. This encourages buying, as it often leaves no one indifferent, and if hesitant, a series of reassuring information, a free cancellation order, a guaranteed refund, and so on. and all this takes place on a computer or smartphone screen, where the user has neither the ability to objectively compare nor evaluate the goodness of the offer. These methods can be found on almost every popular e-commerce site.

Today, it is recommended to use not only traditional marketing tools to promote educational tourism services, increase customer flows and increase their satisfaction, but also to use neuromarketing, which would create a more attractive agro tourism educational product that raises good emotions and increases relaxation.

## CONCLUSIONS

Based on the definitions of neuromarketing provided by researchers, it can be concluded that neuromarketing is the application of neuroscience theory and methods in marketing, in which the applied methods capture the unconscious reactions of service users, reflecting real consumer desires and tendencies to improve marketing strategies.

Neuromarketing uses a variety of tools to conduct research to monitor changes in consumer responses to existing, existing, or new stimuli, with the aim of understanding and understanding consumers and their needs more broadly. All researchers emphasize the need to use neuromarketing in conjunction with traditional marketing tools, thus enhancing the impact on the consumer and convincing him or her that the decision to buy a product or service was the right one.

Qualitative research has shown that in agro tourism education, respondents do not conduct their own research using complex and costly devices / devices, but intuitively apply elements of neuromarketing in their response to agro tourism users' responses to certain stimuli: colour, physical environment, hygiene, educators, information online. This allows them finding out which elements of the educational activity as a

whole should be improved or replaced in order to better understand the client, his needs, as neuromarketing methods help better understand the processes in the consumer subconscious when purchasing an agro tourism educational service.

## REFERENCES

- Ariely, D., Berns, G. S. (2010). Neuromarketing: The hope and hype of neuroimaging in business. *Nature Reviews Neuroscience*, 11(4), 284–292.
- Baker, T. J. (2021). Color and Emotions – Neuromarketing. <https://nmsba.com/news/727-color-and-emotions>
- Bastiaansen, M., Straatman, S., Driessen, E., Mitas, O., Stekelenburg, J. and Wang, L. (2016). My destination in your brain: A novel neuromarketing approach for evaluating the effectiveness of destination marketing. *Journal of Destination Marketing & Management*
- Braidot, N. (2009). *Neuromarketing*. España, Barcelona: Ediciones Gestion 2000.
- Dooley, R. (2011). *Brainfluence: 100 ways to persuade and convince consumers with Neuromarketing*. Canada: Wiley  
<https://www.wiley.com/enus/Brainfluence%3A+100+Ways+to+Persuade+and+Convince+Consumers+with+Neuromarketing-p-9781118175941>
- Fabiano, B. (2020). *Neuromarketology: Harness Converging Technologies and Diverging Audiences to Create Dynamic One to One Marketing and Astonishing ROI*. Sixth Edition, ISBN 978-0-615-37146-7
- Ghuman, P. (2021). Consumer Behavior Vs. Neuromarketing. <https://www.forbes.com/sites/princeghuman/2021/10/02/consumer-behavior-vs-neuromarketing/?Sh=59df73e2126b>
- Kalanta, M. (2016). Vis dar neišnaudotos neurorinkodaros tyrimo metodų galimybės: gal jau laikas? <http://www.delfi.lt/m360/eksperto-zvilgsnis/m-kalanta-vis-dar-neisnaudotos-neurorinkodaros-tyrimo-metodu-galimybes-gal-jau-laikas.d?Id=72887902>
- Kline, J. (2004). Frontal EEG asymmetry, emotion, and psychotherapy: The first, and the next 25 years. *Biological Psychology*, 67(1-2), 1–5.
- Lee, N., Broderick, A. J. and Chamberlain, L. (2007). What is ‘neuromarketing’? A discussion and agenda for future research. *International Journal of Psychophysiology*, 62(2), 199-204.  
<https://doi.org/10.1016/j.ijpsycho.2006.03.007>
- Lewis, D. (2004). Everything You Wanted to Know About Neuromarketing But Didn’t Know Who to Ask. *Journal of Advertising Research* 44(2), 181–187.
- Morgan, D. (2018). What is neuromarketing? <http://cabinet-analytica.fr/en/what-is-neuromarketing/>
- Morin, C. (2011). *Neuromarketing: The New Science of Consumer Behavior*. Society, 48, 131-135.  
<https://doi.org/10.1007/s12115-010-9408-1>
- Nenand, D. H. (2011). *Emotional marketing: Eye-tracking and brain measuring: Using neuromarketing to sell newspapers*. Editor & Publisher, 144(1).
- Plassmann, H., Zoega Ramsoy, T. and Milosavljevic, M. (2011). Branding the Brain – A Critical Review and Outlook. Article in *Journal of Consumer Psychology*, 22(1), 18-36.  
<https://doi.org/10.1016/j.jcps.2011.11.010>
- Stevens, M. (2021). What are Neuromarketing Research Tools? <https://www.insightplatforms.com/what-are-neuromarketing-research-tools/>
- Vaičiukynaitė, E. (2016). Neuromarketingas padeda pažinti vartotoją. <https://ktu.edu/news/jaunoji-ktu-tyreja-e-vaiciukynaite-neuromarketingas-padedapazinti-vartotoja/>