



Marketing and Business Administration Department

Master's thesis on the topic:

«Implementation of Neuromarketing in the Educational Process in the Conditions of Digitalization»

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Dnipro, 2022

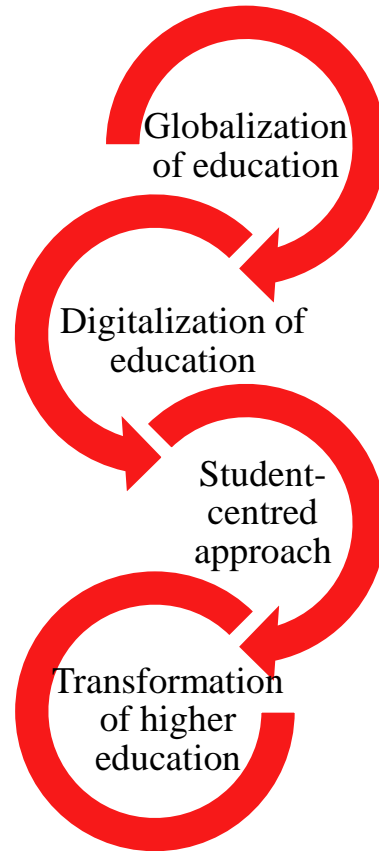


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Relevance of work:



Globalization and digitization of education, increasing the mobility of teachers and students determine the need to use innovative methods of interaction and increase motivation in the conditions of the functioning of higher education. The use of neuromarketing tools in the educational process can be a solution to increase the competitiveness of higher education or individual higher education institutions in the education market



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The purpose of the work is to justify the use of neuromarketing as an innovative method to increase the competitiveness of higher education in the conditions of digitalization of education.



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Tasks for the master's thesis:

- ✓ to clarify the conceptual-categorical apparatus of the research subject, in particular the interpretation of the essence of the concept of "neuromarketing";
- ✓ to research and systemize neuromarketing channels;
- ✓ to substantiate the importance of using neuromarketing in the educational field;
- ✓ to study the phenomenon of clip thinking, its influence on the educational process;
- ✓ to study the influence of the visual channel of neuromarketing on the assimilation of information during the educational process;
- ✓ to study the influence of the sound channel of neuromarketing on the productivity of the work process;
- ✓ to substantiate the impact of dopamine on motivation during learning and the feasibility of using gamification to increase student involvement in the educational process;
- ✓ to improve the method of conducting the educational process in the conditions of distance learning with the help of neuromarketing methods;
- ✓ to develop a methodology aimed at increasing the effectiveness of distance learning by using music as a neuromarketing technique.



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The object of the study is the process of neuromarketing's impact on students' unconscious thinking, their motivation to study and attention.

The information base of the study consisted of: economic literature and periodicals, analytical data on neuromarketing, statistical information, regulations on the organization of education in Ukraine, programs for the development of higher education, as well as the results of research carried out by the author.

Research methodology. The following general scientific and special methods were used in the scientific research to clarify the methodological and practical principles of using neuromarketing as an innovative method: theoretical generalization and comparison - to clarify the scientific definitions of economic categories; statistical and economic - to determine the features and trends of the development of the education market; system-targeted – the use of neuromarketing in order to increase the motivation of the target audience; empirical – to analyse the impact of the proposed methodology; abstract-logical – for theoretical generalization and formulation of conclusions.



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Neuromarketing is a science that combines the knowledge of neurobiology, behavioural economics, marketing and psychology and develops measures to improve marketing activities based on the study of emotional reactions, unconscious brain reactions and human behaviour, affecting all of his 5 senses.



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Methods of neuromarketing:

fMRI (functional
magnetic resonance
imaging);

EEG (electro
encephalogram);

Eye tracking;

Pupillometry;

Biometrics;

Face coding.

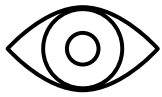


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Channels of neuromarketing:



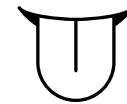
Sight



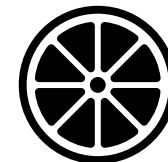
Hearing



Smell



Taste



Touch





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Conclusions according to the first section:

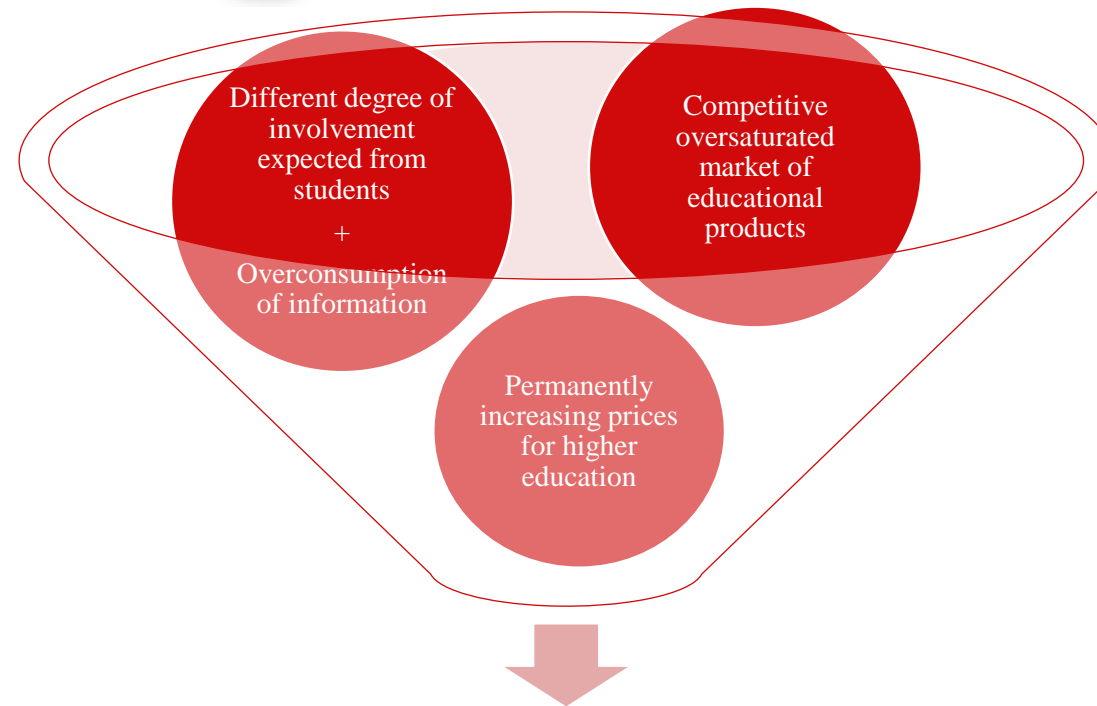
- 1** With the use of neuromarketing methods, it is possible to **improve the quality** of communication with consumers of educational products.
- 2** **Neuromarketing methods** include various methods of monitoring brain activity, brain response, concentration of attention, and emotional changes under the conditions of stimuli that affect these responses.
- 3** **The channels of neuromarketing** influence include the five main senses: sight, hearing, smell, taste and touch.
- 4** **Memory** constructs an image associated with colour, shape, sounds, smells, taste, texture - this helps to make the product more recognizable, the brand stronger.
- 5** Thus, **the subconscious likeliness in choosing** a way to satisfy needs will be given to the product with which the most pleasant and strongest impression is associated.



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Different expectations from the education in the university.

So the university needs to outstand among others

Figure 1. Reasons for different expectations from the higher education



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Table 1. – SWOT-analysis matrix of the digital form of the educational process

Strengths

- access from anywhere in the world where there is Internet;
- the possibility of attending classes even when sick;
- minimizing travel time to the university; schedule **flexibility**;
- independence of education;
- **interactivity** of education;
- access to quality free resources;
- **economy**: minimizing university costs for maintaining comfortable learning conditions;
- possibility of parallel study and work.

Weaknesses

- **labour intensity** both on the part of teachers and on the part of students;
- **additional time** for creating and adapting materials;
- limited technical training of teachers and students;
- complexity of teacher-student, student-student interaction;
- high price for quality conditions and equipment for full involvement (Internet provider, computer, microphone);
- **limitations in extracurricular interaction** between students and the teacher;
- probability of plagiarism;
- difficulty of objective assessment;
- oversaturation with unnecessary information;
- in technical and medical specialties there is a noticeable limitation of practical experience.

Opportunities

- expanding students' access to additional sources of information;
- **increasing the mobility** of teachers and students;
- cooperation of universities to create a common database of course materials;
- diversification of higher education institutions and **strengthening of competition in the higher education market**;
- involvement of students who do not have the opportunity to study offline due to **immobility**;
- involving students with inclusion;
- creation of an adapted educational program for inclusive students with special needs.

Threats

- **reduction of student involvement**;
- problems with concentration of attention;
- **mental stress** from the limitation of live communication;
- development of "**anxiety**" syndrome;
- assessment bias;
- imbalance in decreasing demand and increasing supply in the educational market.



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Clip thinking in communication with Gen-Z students

Visibility of the
theoretical content.



Clear logic in lectures.



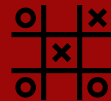
Images for better
memorizing.



“Easy-digestible”
content for more
creativity.



Case-study while
practising.



Quick responding to
questions.





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Music as a tool of neuromarketing to influence the auditory channel and improve involvement during educational process

 50 students of different years from PSTU

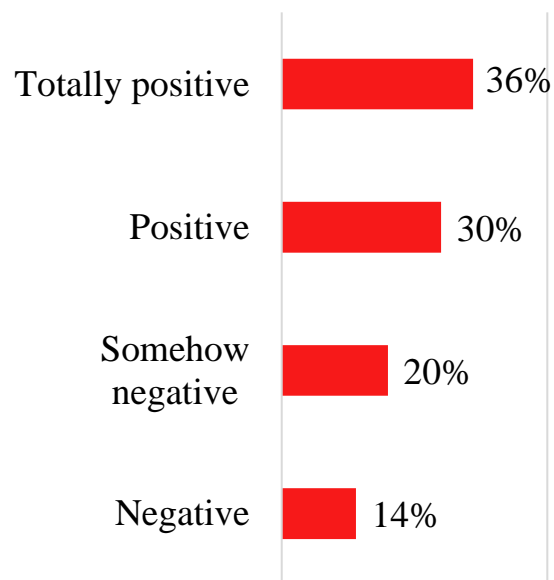


Figure 2. – Attitude to listening to music while studying

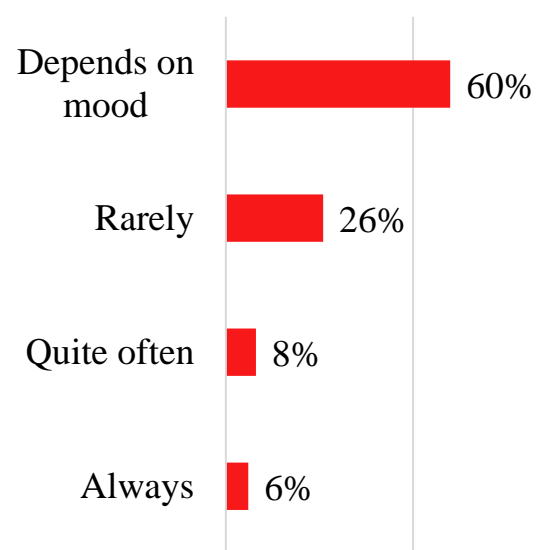


Figure 3. – Frequency of listening to music while studying

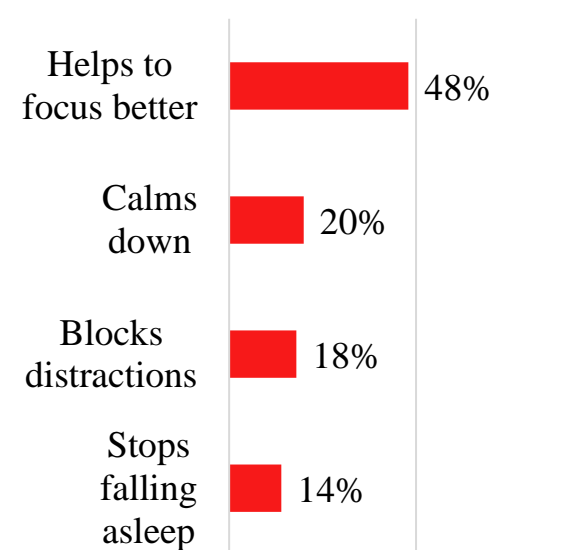


Figure 4. – Reasons to listen to music while studying



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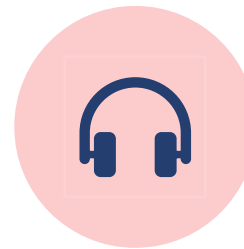
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Music as a tool of neuromarketing to influence the auditory channel and improve involvement during educational process



Listening to background music affects through mediators of **boosting and mood support**, which in turn affects learning outcomes.



Using triggering music creates **calm and friendly atmosphere** while educational process.



Music also **protects the attention** from disruptive factors that appear around, while studying at home.



Music is able to stimulate **energy while focusing**.



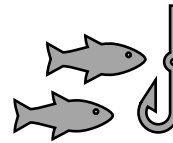
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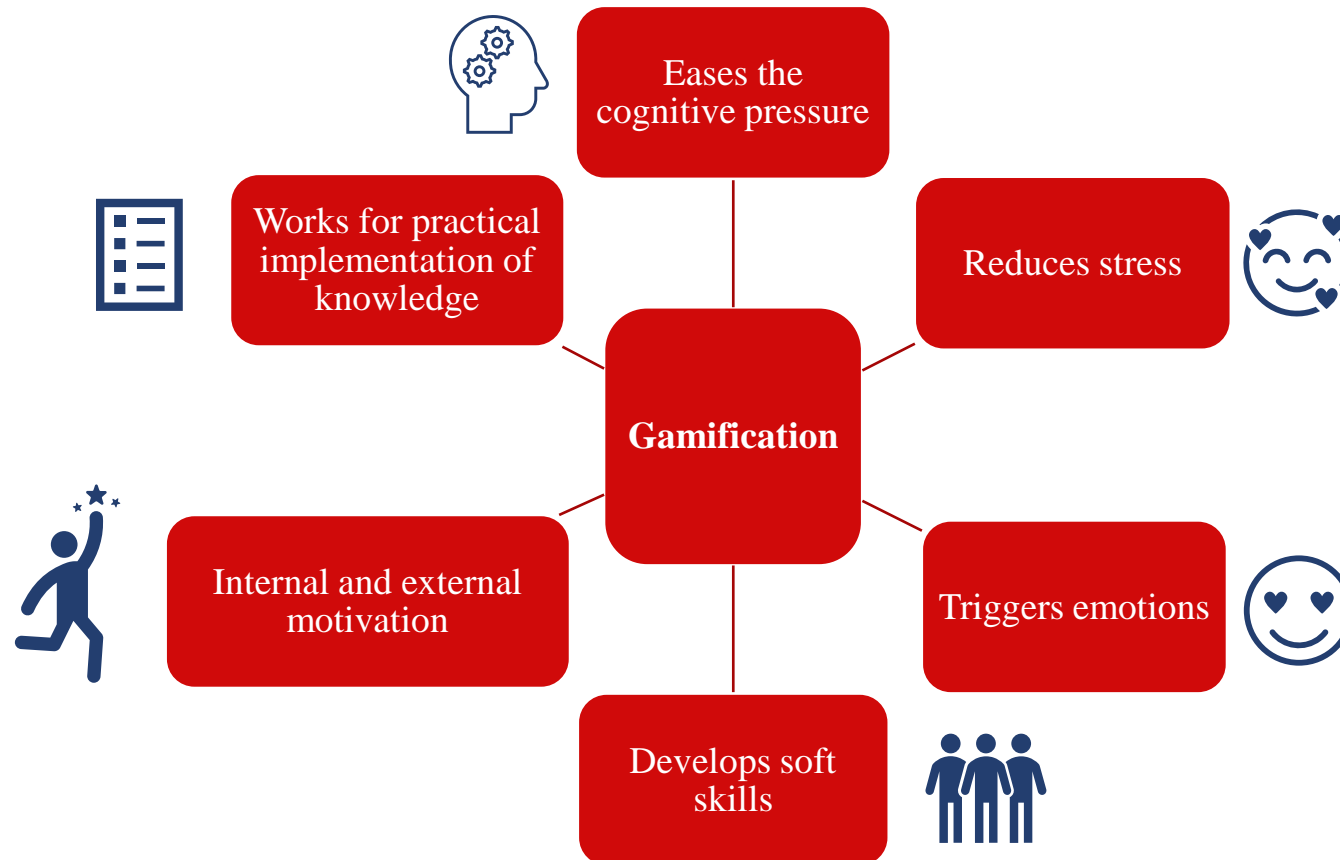
Dopamine as a key element of motivation in neuromarketing

What is dopamine?



To affect dopamine receptors is a main challenge for
today higher education system.

Gamification as a tool to improve the involvement and motivation in educational process





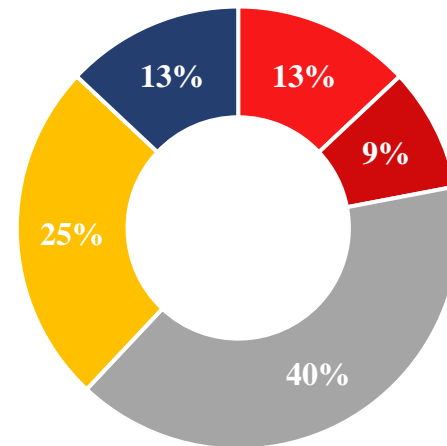
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Motivation of the students

32 students of different years from PSTU



- Minimal motivation without interest in classes
- Minimal motivation, but there is some interest
- Average motivation and a certain interest in the subject
- High motivation and interest
- Very high motivation and great interest

Figure 5. – Overall motivation of students

“How can you estimate your motivation? Choose from the following statements the most applicable to you.”

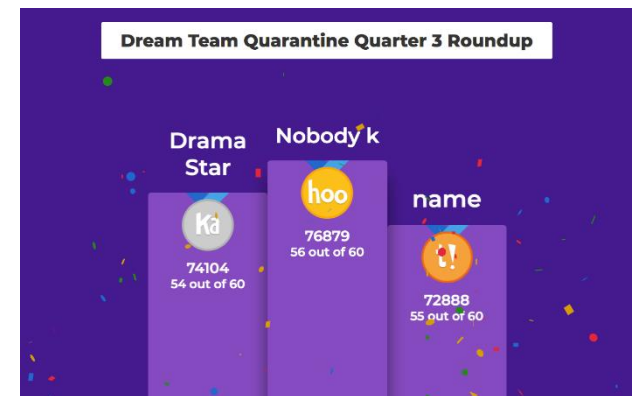
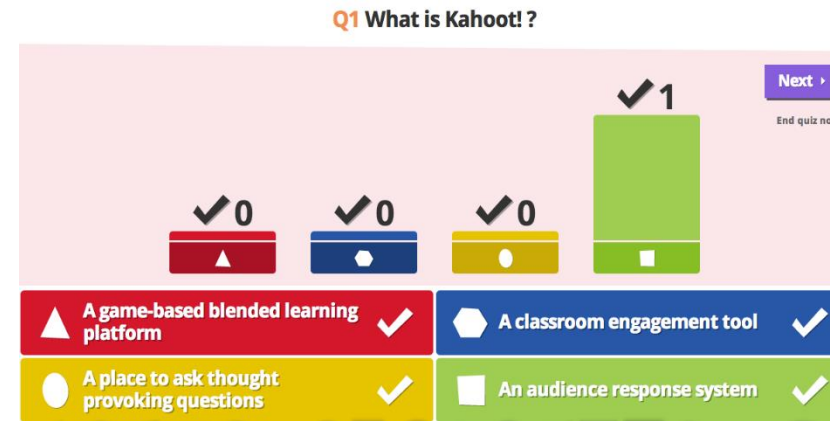
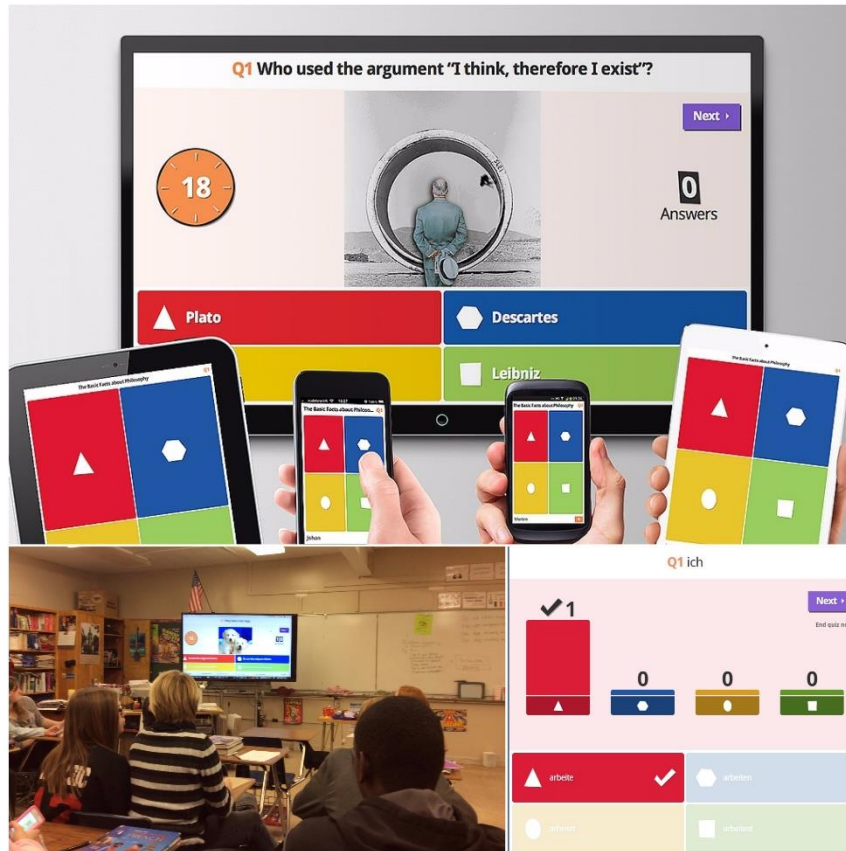


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Implementation of **Kahoot!** into educational process





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Implementation of **Kahoot!** into educational process

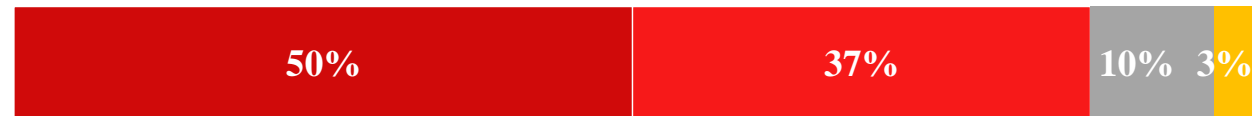
“If the format of information presentation and interaction during the course meet your needs, then you will most likely be interested in the subject of the course”



“I like the use of game techniques on lessons. This adds interest to the course material”



“The spirit of competition increases the motivation to learn.”



“Seeing the result immediately after the answer is more satisfying than waiting for the test to be checked.”



■ Completely agree ■ Somehow agree ■ Neither agree nor disagree ■ Somehow disagree ■ Completely disagree



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Practical Recommendations for the Use of Neuromarketing in the Educational Process





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Thank you for your attention!

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