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RESEARCH ARTICLE OPEN ACCESS

Neuropedagogical Technologies That Develop Analysis, Critical and Creative Thinking

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ABSTRACT

The article analyzes that neuropedagogical technologies that develop analysis, critical and creative thinking are considered an important tool for young people in making moral decisions. These technologies are aimed at developing the ability of young people to deeply analyze moral issues, understand the importance of various aspects and strengthen their own point of view. The importance of forming moral views through neuropedagogical technologies is emphasized.

Keywords: Critical, creative, virtual, neurofeedback, reality, project, person of inclusive education, online counseling, feedback platforms, empathy.

INTRODUCTION

Scientific research is being conducted in the world on the issue of the use of neuropedagogical technologies aimed at the formation and development of moral views in the minds of young people. Today, an in-depth study of the connection between moral education and cognitive, emotional and social development is of great importance, since the formation of moral decision-making skills, responsibility and understanding of social duty in society in young people is an urgent task for all education systems.

The purpose of the study is to develop and implement neuropedagogical technologies that develop analytical, critical and creative thinking.

The task of the study:

- to clarify the essence of neuropedagogical technologies in the formation of moral views;

- to analyze the advantages of virtual reality technology.

Research and analysis

Neuropedagogical technologies that develop analytical, critical and creative thinking. The development of critical and creative thinking in moral education helps young people make independent decisions and form a responsible approach to various situations.

The following neuropedagogical technologies used in the formation of moral views clarified during the study are effective in strengthening moral concepts in the minds of young people:

Virtual reality technology (Virtual Reality – VR) creates new opportunities for young people to more deeply master moral concepts. This technology creates conditions for young people to practically consider life situations, make various moral decisions and play various social roles. With the help of VR technology, students can pretend to be involved in various moral dilemmas, conflict situations or social issues, which supports their emotional, cognitive and social development.

The advantages of virtual reality technology are as follows:

1. Real-life experiences: Students are exposed to a variety of social and ethical situations in a virtual environment and have the opportunity to apply their ethical views in them. Such experiences develop the ability to analyze and evaluate them from different perspectives in young people.

1. Empathy and emotions: Through virtual reality, students can imagine themselves in different roles, for example, as a person in need or a person fighting for social justice. This develops in them a sense of empathy and understanding of the situation of others.

2. The opportunity to make mistakes in a safe environment: With the help of virtual reality, students can learn from mistakes, because decisions in a virtual environment do not have real-life consequences. This allows young people to try out different ethical decisions and evaluate them from a right or wrong perspective.

Below are some examples of how virtual reality (VR) technology can be used in higher pedagogical education to develop the ethical views of future teachers:

1. Facing various problem situations in the classroom. Through the role of a teacher in a virtual classroom, students are faced with various problem situations. For example, students learn to respond fairly and correctly when resolving conflicts or disciplinary issues between students. They are offered different options to solve the problem and are given the opportunity to evaluate the social and moral consequences of each choice. Such experiences are effective in forming qualities such as patience, respect, justice and responsibility in young teachers.

2. Working in an inclusive educational environment. Through virtual reality, students can practice working in inclusive classrooms. They develop the values of empathy and equal treatment of all students through experience working with children with different abilities. For example, there is an opportunity to try different educational methods to help a student with disabilities and ensure their full participation in the lesson process. In this process, future teachers will strengthen their feelings of love and empathy.

1. Working with a student who is experiencing difficulties. In a pedagogical virtual environment, students can try working with students who are difficult to raise or have various mental difficulties. In this situation, young teachers develop such moral values as patience, spiritual strength and humanity. For example, through virtual reality, a teacher can conduct additional exercises on how to talk to, understand and help a student who is showing an aggressive attitude or is not interested in studying.

2. Observing the rules of ethics and pedagogical etiquette. Through virtual reality, students practice observing the rules of etiquette in various pedagogical situations. For example, for a student who is playing the role of a teacher, complex questions or tense situations arise from the student. In such situations, students practically consider compliance with ethical standards and professional ethics using various pedagogical approaches.

3. Making ethical decisions within a team. Future teachers are given the opportunity to participate in various collective activities in a virtual environment. For example, in the process of working in a group, they form an attitude towards students of different ages and abilities, and implement a sense of justice, respect and responsibility in teamwork. This helps young teachers develop effective and humane relationships with their colleagues in the future.

Result. Such experiences obtained through virtual reality technology are effective in shaping students' pedagogical skills, as they help them strengthen empathy, respect, responsibility and other moral values in real-life situations.

Collaborative Platforms (CP) are online spaces that allow teachers and students to collaborate, exchange ideas, and communicate. With the help of such platforms, students can share their experiences in learning ethical concepts, provide mutual advice, and exchange ideas on ethical issues. The use of such platforms in higher pedagogical education helps to effectively organize the process of ethical development.

Below, we will consider some examples of the use of online consultation and exchange platforms in higher pedagogical education.

1. Discussion forums on ethical issues. In order to develop ethical views in higher pedagogical institutions, special online forums can be organized. For example, platforms such as the "Ethical Issues Forum" are created to discuss various ethical dilemmas or pedagogical problems. Here, students can discuss issues related to students, learn their different points of view, and give each other advice. In this process, students develop critical thinking and learn to

approach problems from the perspective of justice and humanity.

2. Online group projects and presentations. On online consultation and exchange platforms, students can work in groups. For example, they work together on projects and prepare presentations covering specific ethical topics. For example, when working in a group on the topic "Ethics in Inclusive Education", each student expresses his point of view and consults with each other. Such a process helps to develop teamwork skills of young teachers and gives them the opportunity to make the right decisions in various ethical situations.

3. Remote ethical consultations. Future teachers can receive advice from experts on ethical questions or problems on an online platform. For example, the opportunity to communicate with professors or qualified educators who provide advice on ethical and pedagogical issues is created. Such consultations help students to help them with various ethical issues and develop skills in adhering to ethical standards in pedagogical activities.

4. Blogs or video blogs for the exchange of ideas. In pedagogical education, online platforms can be used that allow students to write blogs or create video blogs on ethical topics. For example, each student can create a blog on the topic "Ethical Responsibilities of a Teacher" and express their opinions. Then, students can exchange ideas with each other by writing comments on each other's blogs. This process helps young teachers develop ethical views, as well as strengthen their thinking and writing skills.

5. General consultation on ethical dilemmas. Online platforms provide opportunities for discussing ethical dilemmas, and can be used to hold collaborative discussions between students, teachers, and experts. For example, general consultations are organized on topics such as "Maintaining trusting relationships between students and teachers" or "The principle of justice in inclusive education". Such an assistive technology. Through this technology, students have the opportunity to monitor their own brain activity and analyze changes in it. During the neurofeedback process, special devices measure electrical activity in the brain and reflect its state in visual or audio form, and through this a person learns to control the activity of his own brain. This process helps students develop attention, memory, stress management and emotional stability.

6. The following are the importance and advantages of neurofeedback technologies. The discussions prepare young teachers for communication, strengthen their moral views and help them make decisions in various situations.

Result. Online consultation and exchange platforms help young teachers develop teamwork skills, critical and creative thinking, as well as the skills to understand and solve various ethical problems. Through them, students learn to understand ethical concepts more deeply, apply them in life, and respond appropriately in various social situations.

Neurofeedback technologies (NF) — monitor the activity of the human brain and control various cognitive and emotional processes through brain waves:

1. Increasing attention - through neurofeedback, students learn to correctly direct their attention and maintain it for a long time. This process is especially useful in moral training that requires maintaining attention and a high level of concentration on tasks.

2. Forming emotional stability - with the help of neurofeedback, students develop the ability to better understand their emotions and manage them. This method helps to maintain patience and impartiality in moral situations.

3. Improving memory and cognitive abilities - the neurofeedback process helps to strengthen memory, effectively process information, and deepen the assimilation of moral views.

Below we will consider some examples of the use of neurofeedback technologies in higher pedagogical education.

1. Maintaining attention during the analysis of ethical issues. Students in the pedagogical direction often analyze various ethical and social issues. With the help of neurofeedback, students learn to maintain attention and achieve a full understanding of each aspect in the process of analyzing complex problems. For example, a teacher gives students several topics related to ethical dilemmas and asks them to develop their ability to pay attention and maintain attention for a long time using neurofeedback.

2. Stress management and patience training. In pedagogical education, various stress management trainings can be

conducted for students. Using neurofeedback, students monitor their stress levels and try to reduce them. For example, at the pedagogical faculty, students undergo special neurofeedback trainings to develop patience and stress management skills. With the help of such trainings, young teachers learn to control their emotions in different situations.

3. Increasing emotional stability in adhering to moral principles. With the help of neurofeedback, students learn how to behave in the process of making various moral decisions by monitoring their emotions and brain activity. In the pedagogical direction, students are trained in making moral decisions through various simulations or role-playing games. Through neurofeedback, they learn to control their emotions and objectively evaluate different points of view, which helps them to be emotionally stable in pedagogical activities.

4. Training aimed at improving memory and analytical skills. In ethical topics or situational analysis in education, young people need to strengthen their memory and analytical skills. With the help of neurofeedback technologies, they participate in special training aimed at improving memory. In the process of pedagogical education, young people, for example, develop memory and analytical skills through neurofeedback methods, remembering various difficult situations and dilemmas and finding solutions to them.

Result. Neurofeedback technologies are an effective tool used in higher pedagogical education to support the cognitive and emotional development of students. With the help of these technologies, students have the opportunity to develop the patience, memory, critical and creative thinking skills necessary not only to understand moral concepts, but also to apply them in practice in life.

Audiovisual Simulations (AS) are one of the technologies used to effectively master ethical concepts and decisions in the educational process, which allow for the realistic representation of various situations using visual and audio tools. This technology helps young people to practically observe complex social and ethical issues, analyze them, and make the right decisions. Audiovisual simulations engage students more than written or theoretical lessons, delivering educational materials in a lively and realistic way.

The importance and advantages of using audiovisual simulations are as follows:

1. Real-life experience - with the help of audiovisual simulations, young people see how various social, ethical, and professional situations can manifest themselves in real life and gain a deeper understanding of them. This method is important in the practical mastery of ethical concepts.

2. Understanding through emotions – audiovisual simulations help young people to master moral concepts through emotions, as realistic sounds and images evoke feelings of empathy, respect and responsibility in young people.

3. Understanding different perspectives – simulations show young people different perspectives and encourage them to understand complex social or moral problems from different angles. This develops young people's critical and creative thinking skills.

Below we will consider examples of the use of audiovisual simulations in higher pedagogical education.

1. Demonstration of moral dilemmas in practice. In the process of pedagogical education, students are shown various moral dilemmas through audiovisual simulations. For example, young people are shown video plots or multimedia clips on problems between teachers and students, social relations, issues of justice or responsibility. Students observe the actions of various characters and their consequences, analyzing them from a moral perspective.

2. Teamwork with students through simulations. Audiovisual simulations are also effective in organizing group discussions and analysis activities. For example, students are shown a simulation on the conflict of public interest or personal interests in team work, and then they are asked to draw a collective conclusion on this issue. Such activities help young people to strengthen their sense of respect, responsibility and justice in team relations.

3. Simulations that develop empathy. With the help of audio-visual simulations, students can be taught to understand the feelings of different characters and approach them with empathy. For example, students are shown videos depicting various difficult situations in people's lives. They learn to approach different people and situations with empathy, to understand different feelings. This process helps young people to form moral views and adhere to them.

4. Real-time observation of the process of making moral decisions. In higher pedagogical education, students are shown situations related to various events and phenomena and are asked to make quick decisions. For example, through simulations, students learn what decisions to make in various ethical situations. This helps them think quickly, critically analyze, and make the right decisions.

Conclusion. Audiovisual simulations are an effective tool used in higher pedagogical education to deepen their understanding of ethical concepts, apply them in various social relationships, and build emotional stability in young people. This technology allows young people to understand events and form their own opinions, as well as develop the feelings necessary to correctly apply ethical concepts in life.

Ethical Debates on Social Media (EDSM) allow young people to openly express their opinions on various social, moral and cultural issues, defend them and understand different perspectives. Social media platforms for ethical debates (e.g. Facebook groups, Twitter, Instagram or special education platforms) serve as an important tool for developing critical and creative thinking among students. Such discussions help young people to explore different opinions on real-world moral and social issues and to form their own perspectives in a unique way.

Advantages of using ethical debates on social media:

1. Real-time exchange of ideas - through social media, students can express their opinions on various topics in real time and receive responses. This develops their skills in quickly understanding problems, approaching them critically and justifying their views.

2. Strengthening moral views - social media helps young people to understand their own moral views more deeply by expressing their own views on various moral issues and studying the views of others. They learn to accept and respect different opinions in society.

3. Developing feelings of empathy and respect - moral discussions help young people to understand the opinions of other people and treat them with respect. This develops empathy, humanity and responsible relationships in young people.

Below we will consider examples of the use of moral discussions on social media in higher pedagogical education.

1. Discussions of moral dilemmas. In pedagogical education, students are assigned to discuss posts or videos presenting moral dilemmas on social media. For example, a teacher writes a post or publishes a video about the conflict between public interests and personal interests, and students must express opinions from different sides. This method helps young people understand complex ethical issues and justify their views.

2. Open discussions on topics. By creating a special group or page on a social media platform, students can discuss ethical issues. For example, discussions are organized on topics such as human rights, environmental protection, or justice in education. Students express different opinions and evaluate different points of view. This process serves to guide young people towards social responsibility.

3. Encourage the exchange of ideas and critical thinking. The use of social media in higher education is an effective tool for developing critical thinking in young people. For example, students are asked to read an article on an ethical topic and express their opinion on this topic on social media. Each student evaluates their own opinions and the arguments presented with a critical approach, which helps them to understand their own ideas more deeply.

RESULTS AND CONCLUSION.

Based on the above analysis and the proposals made, the following conclusions can be drawn:

-Ethical discussions on social media serve as an important platform for young people to understand and apply moral concepts more deeply. Such discussions increase the social responsibility of young people and instill in them values such as respect, humanity and solidarity in various moral and social issues. In this way, moral education can be organized more effectively in the process of higher pedagogical education.

-The important role of neuropedagogical technologies in the formation of moral views was analyzed.

-The neuropedagogical approach allows you to direct moral education in accordance with the cognitive and emotional development of young people. In this case, through role-playing games, simulations, situational analysis, reflection, as well as technologies that develop

analysis, critical and creative thinking, young people will more deeply understand moral concepts and form the skills to behave correctly in various social relationships.

-Ethical methods help to strengthen young people's ability to correctly assess ethical issues, make independent decisions, and feel personal responsibility. Neuropedagogical technologies serve as an effective tool for developing young people's ethical views through creative approaches and critical thinking.

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