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A RESEARCH ON TEACHERS' VIEWS ON THE USE OF ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH

Abstract

The popularity of Artificial Intelligence (AI) in teaching English can be attributed to the advancement in natural language processing (NLP) and machine learning (ML). NLP allows machines to understand and interpret human language, while ML enables them to learn from data and improve their performance over time. These two technologies are the backbone of AI-powered language learning systems, which have become increasingly sophisticated and accurate over the years. Today, AI has been applied in various ways

to support EFL teachers and learners. Thus, in this study we tried to explore teachers' views on the use of AI in teaching English in Kazakhstan. The study employed qualitative research method design. Fifteen teachers from different local schools of Turkistan participated in the study. The semi-structured interview was conducted and the data from the study was analysed by the QDA Miner Lite program (version 1.4.1). The findings of the study state that the majority of the participants are familiar with AI and know how to use it in the English classes however their knowledge is not deep.

Keywords: English as a Foreign Language (EFL), Natural Language Processing (NLP), Machine Learning (ML), Artificial Intelligence (AI), ChatGPT.

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АҒЫЛШЫН ТІЛІН ОҚЫТУДА ЖАСАНДЫ ИНТЕЛЛЕКТТІ ҚОЛДАНУ ТУРАЛЫ МҰҒАЛІМДЕР ШКІРІН ЗЕРТТЕУ

Аңдатпа

Ағылшын тілін оқытуда жасанды интеллекттің (ЖИ) танымал болуы табиғи тілді өңдеу (ТТӨ) және машиналық оқыту (МО) саласындағы жетістіктермен байланысты болуы мүмкін. ТТӨ машиналарға адам тілін түсінуге және түсіндіруге мүмкіндік береді, ал машиналық оқыту оларға деректерден үйренуге және уақыт өте келе олардың жұмысын жақсартуға мүмкіндік береді. Бұл екі технология ЖИ негізіндегі тілдерді оқыту жүйелерінің негізін құрайды, олар жылдар бойы жетілдірілген және нақты бола бастады. Бүгінгі күні ағылшын тілі пәні мұғалімдері мен ағылшын тілін үйренушілер ЖИ әртүрлі түрлерін қолданады. Біз бұл зерттеуде Қазақстанда ағылшын тілі мұғалімдерінің ЖИ-ті қолдану туралы көзқарастарын зерттеуге тырыстық. Зерттеуде сапалы зерттеу әдісі қолданылды. Зерттеуге Түркістан қаласындағы жергілікті мектептерден 15 мұғалім қатысты. Жартылай құрылымдық сұхбат жүргізілді және зерттеу деректері QDA Miner Lite (1.4.1 нұсқасы) арқылы талданды. Зерттеу нәтижелері көрсеткендей, қатысушылардың көпшілігі ЖИ-мен таныс және оны ағылшын тілі сабақтарында қолдана алады, бірақ олардың білімі терең емес.

Түйін сөздер: ағылшын тілі шет тілі ретінде (АТШР), табиғи тілді өңдеу, машиналық оқыту (МО), жасанды интеллект (ЖИ), чат gpt.

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ИССЛЕДОВАНИЕ МНЕНИЙ УЧИТЕЛЕЙ ОБ ИСПОЛЬЗОВАНИИ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ПРЕПОДАВАНИИ АНГЛИЙСКОГО ЯЗЫКА

Аннотация

Популярность искусственного интеллекта (ИИ) в обучении английскому языку можно объяснить прогрессом в обработке естественного языка (NLP) и машинном обучении (МО). ОЕЯ позволяет машинам понимать и интерпретировать человеческий язык, а машинное обучение позволяет им учиться на данных и со временем повышать свою производительность. Эти две технологии составляют основу систем изучения языков на базе ИИ, которые с годами становятся все более сложными и точными. Сегодня ИИ по-разному применяется для поддержки учителей и учащихся английского языка как иностранного. Таким образом, в этом исследовании мы попытались изучить взгляды учителей на использование ИИ в обучении английскому языку в Казахстане. В исследовании использовался качественный метод исследования. В исследовании приняли участие 15 учителей из разных местных школ Туркестана. Было проведено полуструктурированное интервью, и данные исследования были проанализированы программой QDA Miner Lite (версия 1.4.1). Результаты

исследования показывают, что большинство участников знакомы с ИИ и умеют использовать его на уроках английского языка, однако их знания неглубокие.

Ключевые слова: английский как иностранный (АКИ), обработка естественного языка (ОЕЯ), машинное обучение (МО), искусственный интеллект (ИИ), чат gpt.

Basic provisions. Artificial intelligence (AI) is seen by many English teachers as a useful tool for offering individualized learning experiences and customized education that satisfies each student's particular language learning demands. The capacity of artificial intelligence to provide immediate feedback on syntax, vocabulary, and pronunciation is highly appreciated since it allows students to advance at their own speed and frees up teachers to concentrate on more difficult language teaching components. English teachers are beginning to realize how important it is to include AI into the curriculum in order to improve students' digital literacy and better prepare them for a society where technology is pervasive. Concerning the possible over-reliance on AI, several English teachers stress that technology cannot take the place of important human components of instruction, such empathy, cultural awareness, and motivation. The use of AI in the classroom is seen as a means to foster greater student autonomy and engagement, encouraging learners to take more control over their language learning journey. However, challenges such as ensuring equitable access to technology and providing adequate teacher training for effective AI integration remain key concerns among English teaching professionals.

Introduction. Artificial Intelligence was discovered thousands of years ago and is now employed in many sectors. Between 750 and 650, authors first proposed the idea of robots and self moving things, eventhough devices and ancient featured robotic notions, and their appeal only growing today [1].

Therefore, a machine could be able to appropriately receive, understand, learn from, and use data [2].

In the modern era, artificial intelligence is likely to be subdivided into technological sub-fields like deep learning, natural language processing (NLP), machine learning, neural networks, and computer vision. Without a question, machine learning is essential to each of these sub-fields.

By optimizing different variables based on the known outcomes of a problem, it is possible to identify the problem pattern in Artificial Intelligence techniques that concentrate on Machine Learning [3]. This enables the processes of developing solutions to new situations that have not yet been encountered.

Deep learning. In order to handle larger and more complicated data clusters and provide successful answers, deep learning, a sub-branch of machine learning, uses advanced types of artificial neural networks [4, 5]. Due to the enormous and complicated amounts of data available today, deep learning techniques have become more important. In practically every area of the corporate world, these methods are seen to produce successful outcomes, and their popularity is only growing [6].

Swarm Intelligence. It is an autonomous branch of artificial intelligence that does not require learning procedures. It is based on the way in which swarms of living organisms in nature solve problems collectively. In swarm intelligence algorithms, communities of living things work together to solve problems through continuous optimization, much like the swarms of ants, birds, and bees in nature [7]. Since machine learning is a form of optimization, literature commonly employs both machine learning and swarm intelligence techniques in combination [8].

Cybernetic. The science of cybernetics, which has a lengthy history, is also seen as one that aims to modify the nervous system of living beings in order to integrate it with digital systems. He described it as a branch of research that examines control and communication in both living and non-living things [9].

Robotics. The study of designing and creating intelligent robot systems is referred to as robotics, a branch of artificial intelligence. Robotics, which is now divided into the categories of

hard robotics and soft robotics, can also create solutions in relation to industries like electronics, mechanical and materials engineering, biomedical and chemical engineering, and even chemistry and biotechnology. Different data processing solutions, such as image processing and signal processing, help artificial intelligence solutions in the architecture of robotic development [10].

Shidiq M. studies the use of AI in education, specifically the ChatGPT system, which can produce text in various formats. While AI provides conveniences in education, the ease of ChatGPT reduces the originality of work, posing challenges for developing students' creative writing skills. The article suggests using paper for creative writing assignments to minimize the use of ChatGPT and assess students' writing skills [11].

Liu A., Kong D. examined the integration of AI technology into college English teaching to enhance the quality of education. It identifies the limitations of the current teaching model and proposes a new mode based on AI technology. The new mode involves the introduction of AI entities to assist students in learning activities and reduce the workload of teachers. The article also discusses the tasks that teachers and students need to undertake in each teaching stage and the assessment of teaching tasks. The use of AI technology can stimulate students' interest in learning and provide good evaluation feedback, which is significant for improving students' listening, speaking, reading, and writing skills and achieving college English teaching goals [12].

Visaltanachoti C., Chantana Viriyavejakul T. R. assisted Thai students in learning English, an AI technology algorithm was deployed as one of the data collection techniques. It was discovered that the measures of sentence structure and English vocabulary knowledge had an IOC consistency (IOC) range of 0.60-1.00, a range of difficulty of 0.26-0.75, and a discriminant power of 0.74. A t-test was also used to analyze the data from the dependent sample. The AIT algorithm prototype helped teach English to students, and the results revealed that they knew more about the language than they had before. The model also obtained the highest level of satisfaction from the pupils. Therefore, the quality can be deemed appropriate and acceptable [13].

In Sun Z., Anbarasan M., Praveen Kumar D. study the decision tree algorithm and neural networks have been used to generate an English teaching assessment implementation model based on decision tree technologies. It provides useful data from extensive informatics to develop a deep learning-assisted online intelligent English teaching system that enables students to improve their English language teaching efficiency in accordance with their knowledge and personality [14].

Today and in the past, alternative searches have emerged to make language lessons more consistent, productive and exciting, and as a result, the idea of using AI in language teaching has arisen. Looking closely at AI and language, it can be seen that the two are closely related. In this direction, we can say that the use of literature in the process of teaching a language and the benefits that it can bring will make a profound contribution to the study of students of the target language. This research aims to collect and examine teachers' views about the use of AI in English teaching.

The primary purpose of this study is to reveal and examine teachers' views about the use and place of AI in facilitating language teaching. To this end, the following questions have been answered.

1. What is the Artificial Intelligence?
2. What AI Apps are useful at English classes?
3. What is the purpose of using AI Apps at the English classes?
4. What are the benefits of using AI Apps at the English classes?

Materials and methods. This study was designed as qualitative research to collect and analyze teachers' opinions on the use of AI in English teaching. Qualitative research methods are used to systematically examine the meanings obtained in research. In other words, we can define qualitative research as research conducted to obtain perceptions and events holistically and realistically in their natural environment by using document analysis, observation and interview techniques.

The main purpose of qualitative research is to focus on the participants' experiences and opinions and ensure that their "perceptions and experiences are revealed". Another feature of

qualitative research, contrary to quantitative research, it enables the researcher to make sense of the facts gathered by “inductive analysis” and to build a theory based on these data. This is different from cause-and-effect or a theory and hypothesis to be tested. The “flexibility in research design” aspect and choice of methods or methodologies appropriate for the research, that is, the use of numerous methods, are further features of qualitative research[15].

15 English teachers from local schools of Turkistan participated in the study. As the sample, a meeting plan was prepared with a total of 15 teachers, 11 women and 4 men, and the interviews were done via the remote meeting tool (Zoom). Each of the survey interviews conducted over the Zoom program lasted an average of 15-20 minutes. The interviews with the participants were recorded at their request, and each of them declared that they participated in this study voluntarily. This research consists of four open-ended questions about the use of AI in the lessons of English teachers working in secondary and high schools, which are valid and prepared by using the AI.

Data from interviews are examined in this study in four stages: (1)

Coding the data, (2) identifying the codes, categories, and themes, (3) grouping the codes, categories, and themes, and (4) defining and interpreting the findings[16]. Coding the data: In the data coding phase, the researcher examines the collected data and tries to divide the data set into meaningful parts and determine which concept each part corresponds to. The researcher gives each piece that creates meaningful structures in itself a name. In most cases, sections can be words, phrases, or phrases. In the process of coding the data, a researcher may often need to read a dataset multiple times. Detailed reading makes it easier to understand the meaning of words or phrases repeated by the participants. The coding process is very dynamic, and the researcher repeatedly returns to the data set and goes through the coding process. Although iterative coding varies depending on the depth and size of the data set, it is possible to encounter new codes even after categories and topics have been created, and in most cases, it is seen that the researcher coding during the data analysis [17].

Data Analysis The QDA Miner Lite program (version 1.4.1) was used to analyze data from a semi-structured interview with students about their perceptions. During data analysis, four categories were formed based on interview and research questions. The coding was revealed based on the content of each category, i.e. the responses of the students. The table below details the analysis of the data obtained from the students' perspectives:

Table 1 Content analysis of students' perceptions

Category	Code
The notion of Artificial intelligence	Branch of computer sciences No idea Using various techniques Robotics Natural language processing Self-driving cars Machine learning Electro cars Deep learning
Artificial Intelligence Apps used at English classes	ChatGPT Duolingo Google translate Yandex translate Elsa speaks No Idea
The purpose of using Artificial Intelligence Apps at English classes	Enriching vocabulary Developing translation skills Teaching essay writing Reading comprehension

	Improving assessment questions Saving time Learning languages Improving all four skills Improving speaking skills No idea
The benefits of using Artificial Intelligence Apps at English classes	Increase motivation No idea Evaluate performance Students' special needs Teachers can save time Use Duolingo Use computers Collecting and analyzing data Courses can be taken everywhere Teach English

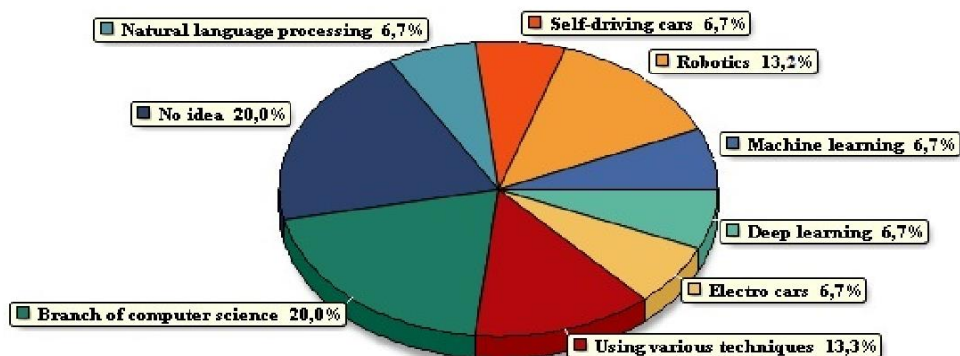
The purpose of this study was to examine the broader context of sentences containing attitudinal resources using content analysis and both verbal and numerical (%) data presentation.

Results and Discussion. This section presents the findings and discussion of data obtained from students' perceptions about the Artificial Intelligence in accordance with research questions, namely categories such as notion, Artificial Intelligence Apps, usages and benefits of Artificial Intelligence revealed on semi-structured interview questions and codes from students' responses.

1 RQ: What is the Artificial Intelligence?

The results of analyzing students' perceptions on the notion of AI are summarized in Figure 1. There were 15 attitudinal expressions found in 15 interview reflections by EFL teachers.

Figure 1: Students' responses on the notion of AI.



The pie chart shows that 20% think AI is branch of computer sciences, 13.3% of the participants perceive AI as using various techniques, 13.2% found AI as robotics, the participants who think AI is natural language processing, self-driving cars, electro cars, machine learning are the same 6.7%.

The findings of the study state that most of the participants have an idea about AI:

P6: "Artificial intelligence is a branch of computer science that focuses on building smart machines that can imitate human behavior."

P8: "Because of various AI technologies, whenever we begin writing or translating something, we quickly turn to Google Translate or Yandex Translate for assistance."

P1: "To my mind AI is connected with self-driving cars because AI is done without human help."

P15: "AI is everything which is done with the help of various techniques."

However 20% of the participants do not have any idea of the AI:

P2: "I have never heard about AI."

P3: "I have no idea what is AI."

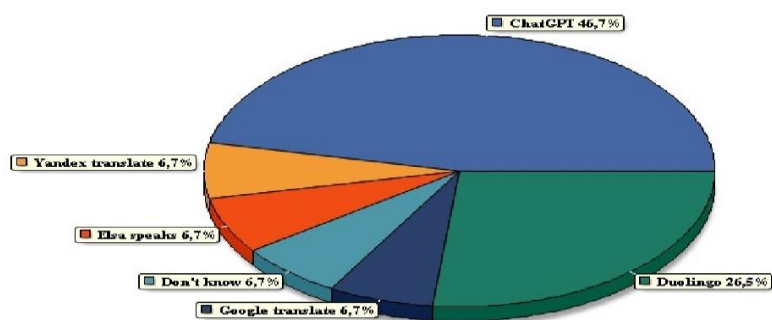
P10: "I do not know."

From the above given examples we can see that the participants do not have deep knowledge about AI.

2. RQ: What AI Apps are useful at English classes?

According to the data we can see that 46,7% of participants think ChatGPT is the most useful Ai App and 26.5% participants choose Duolingo as useful AI App, and some participants think Yandex translate ,Google translate and Elsa speaks are useful.

Figure 2: Students' responses on the usefulness of AI.



P1: "With the help of ChatGPT, an AI-powered natural language processing tool, you can communicate with the chatbot in a variety of ways that are human-like. The language model may help you with things like writing emails, essays, and code as well as provide answers to your inquiries."

P5: "ChatGPT. Because of its reinforcement learning from human input paradigm, ChatGPT differs from previous chatbots in that it can produce normal language, recognize when it has made mistakes, and do other things."

P11: "ChatGPT. The tasks that ChatGPT is capable of carrying out include authoring emails, articles, innovative stories, and programming code."

P8: "Duolingo. The most downloaded education app worldwide is Duolingo, the most widely used language-learning program."

P9: "Duolingo, the language learning app provides a high-quality language learning experience for free and keeps a positive, inviting environment from the moment you join up."

Minority of the participants vote for Google translate, Yandex translate and Elsa speaks. However 6.7% of participants' answers were 'have no idea'.

3. RQ: What is the purpose of using AI Apps at the English classes?

From the obtained data we can see that the majority of participants think the main aims of AI Apps are developing translation skills 13,3%, enriching vocabulary 13,3% , teaching essay writing and reading comprehension 13.3%:

S12: "The main aim of AI Apps is the improve translation skills. You can translate yourself and then check your translation and work on your strengths and weaknesses."

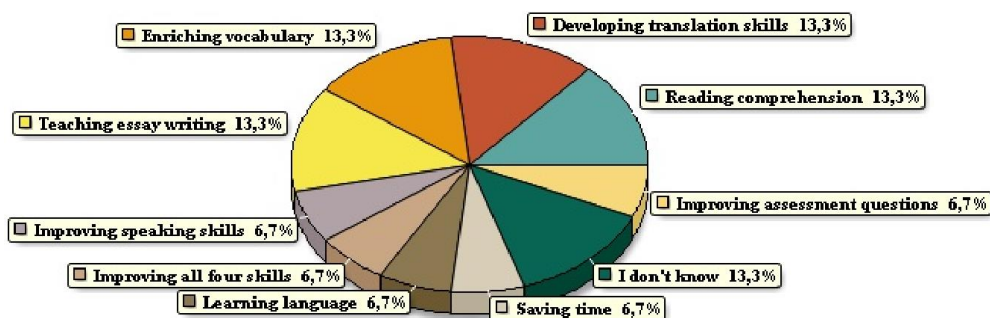
S13: "Vocabulary game apps can help you build your vocab without noticing it."

S14: "An AI writing assistant can assist with research, formatting, and grammatical checks as well as tone and grammar analysis. Additionally, they can generate summaries, suggest themes,

offer advice, and offer reference details. Writing AI solutions make it simpler for authors to produce more effective material faster.”

S4: “In the past, determining reading comprehension has been a laborious procedure that calls for a skilled human assessor to judge the reader's knowledge of a certain book. However, AI has opened up new possibilities for automating and improving the reading comprehension assessment process. Natural language processing (NLP) tool development is one of the most exciting uses of AI in this area. NLP technologies can precisely evaluate the grammar, context, and linguistic structure of a text to determine its meaning and determine the reader's level of comprehension.”

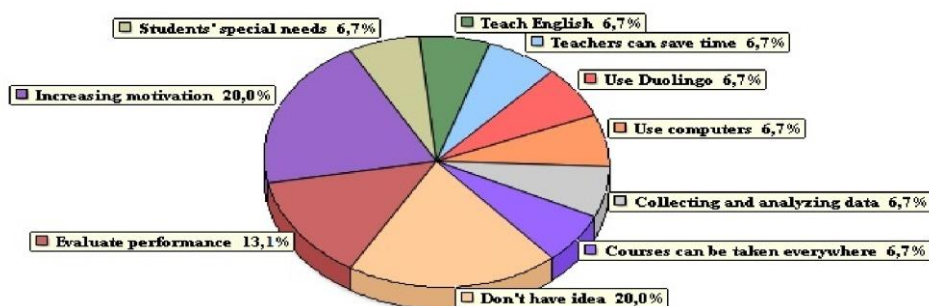
Figure 3: Students’ responses on the purpose of using the AI.



And minority of the responses claim that the purpose of using AI are improving speaking skills 6.7%, improving all four skills 6.7% , learning language 6,7 % and saving time. 6,7% .Also, 13,3 % of participants do not have answers.

4 RQ: What are the benefits of using AI Apps at the English classes?

Figure 4: Students’ responses on the benefits of using the AI.



The data of the study show that the majority of the participants think that AI Apps are beneficial in increasing motivation of students 20% and Evaluate performance of the students 13,1%:

P5: “Instead of using only books in teaching English by using different kinds of technology and Apps we can increase students’ motivation.”

P8: “With the development of artificial intelligence over the past two decades, it is now incredibly easy to predict a student's likelihood of success or failure by evaluating their performance in advance”

The minority of the participants think teachers can save time 6,7%, Use computers 6,7% and tech English 6,7% and etc.

P1: “We can develop comprehension of reading passages through the use of information retrieval methods.”

P4: “We can use machine translation to help students improve their translating abilities.”

P7: “Using free online dictionaries to expand students' vocabularies.”

P13: “Using a writing evaluation technique to instruct students on how to write essays and paragraphs.”

The study results were close to Shidiq and Liu, Kong’s study. From the findings of the study we can see that AI is very useful for English teachers. With systems that accurately translate between English and Kazakh in accordance with contemporary dictionaries, which give the vocabulary items an accurate meaning according to their circumstances, AI can improve the learning process. These tools can present key concepts from the reading passages, group words into sentences and paragraphs, and use sounds to distinguish between letters and words. They are able to recognize word mappings and make connections between texts, images, and sounds. However, in all four research questions there were answers like ‘No Idea or I do not know’. It shows that the teachers need to learn about AI Apps and use them at the English classes because it is very difficult to interest the young generation only with books or computers, the teachers should be in trends in order to have good students.

Conclusion.Based on the findings of this study, it can be concluded that AI's role in learning can affect how well a person speaks. The use of artificial intelligence (AI) in the form of applications, websites, and other technologies can help students understand difficult words, build sentences, develop their writing and listening skills, and acquire new linguistic talents. As a result, it is crucial that educational institutions think about the development of AI-based learning in order to improve productivity and innovation. However the teachers’ literacy in using AI is low, even some of the participants does not have any imagination about AI. In a nutshell, we should have courses as “AI in teaching English or AI intelligence in education” to motivate our students to study and learn languages.

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ҒАЛЫМ ЗЕРТТЕУШІЛЕРДІҢ ЕҢБЕКТЕРІНДЕГІ «ИНКЛЮЗИВТІ БІЛІМ БЕРУ» ҰҒЫМЫНЫҢ КОНТЕНТ-ТАЛДАУЫ

Аңдатпа

Мақалада зерттеуші ғылыми педагогикалық, психологиялық, арнайы әдебиеттерге сүйене отырып, инклюзивті білім беру мәселесін кеңінен қарастыруға тырысқан. Автор қазақстандық және шетелдік ғалым зерттеушілердің еңбектерін зерделей келе, контент-талдау әдісін пайдалану арқылы «инклюзивті білім беру» ұғымына жан-жақты талдау жасаған. Контент-талдаудың түйіні ретінде инклюзивті білім берудің ерекше сипаттарын анықтаған.

Мақалада инклюзивті білім беру мәселесін зерттеген ғалымдардың еңбектеріндегі мүмкіндігі шектеулі балаларды оқытуды ұйымдастыруда басшылыққа алатын мынадай: медициналық модель, қалыпқа келтіру моделі және әлеуметтік модель сияқты амалдарды анықтаған.

Сонымен қатар, АҚШ мен Еуропа елдерінің білім беру саясатындағы білім беру амалдарына тоқталған: білім беруге қол жетімділікті кеңейту, мэйнстриминг, интеграция, инклюзия, білім беру мекемелерін реформалау.

Ғылыми әдебиеттерге жасалған талдау негізінде автор өз түсінігін ұсынады, яғни инклюзивті білім беру – бұл әлемдік білім берудің заманауи тенденцияларына сәйкес даму бағыты, білім беру жүйесінде жоғары құндылықтарға, мәдениетке негізделген жаңа деңгейі екенін алға тарта отырып, инклюзивті білім берудің құрылымын анықтаған.

Түйін сөздер: инклюзивті білім беру, жалпы білім беретін мектеп, мүмкіндігі шектеулі балалар, инклюзия, оқытудың амалдары, білім беру ортасы.

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КОНТЕНТ-АНАЛИЗ ПОНЯТИЯ «ИНКЛЮЗИВНОЕ ОБРАЗОВАНИЕ» В ТРУДАХ УЧЕНЫХ ИССЛЕДОВАТЕЛЕЙ

Аннотация

В статье исследователь опираясь на научно-педагогическую, психологическую, специальную литературу попыталась шире раскрыть проблему инклюзивного образования. Автор на основе изучения трудов казахстанских и зарубежных ученых, используя метод контент-анализа разносторонне раскрывает сущность понятия «инклюзивное образование». Резюмируя контент-анализ определила особенности инклюзивного образования.