



METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS ON INDIVIDUAL WORK WITH THE HELP OF ARTIFICIAL INTELLIGENCE

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Annotation: *This at work artificial artificial intelligence (AI) technologies using students individual work with modern methodical approaches seeing The research was conducted main purpose – SI- based adaptive training systems , real - time feedback mechanisms and personal training plans through education process personalization according to practical recommendations working is an exit . References analysis , methodological synthesis and Uzbekistan education to the environment customized results based on teachers for concrete methodical instructions presented Results this shows that SI individual performance efficiency noticeable at the level increases , students motivation and independent study skills develops , but moral problems , information privacy and teachers qualification increase issues solution to be must . Work education practitioners , methodologists and teachers for manual as intended .*

Keywords: *artificial intelligence , individual performance , personalized education , adaptive training systems , real -time feedback , personal training plan, education methodology , Uzbekistan education system .*

Current globalization and digital transformation during education system society development the most important from factors one as increasingly improving is going on . Information technologies intense development of the internet expansion and digital of tools popularity as a result education to the process innovative approaches current to grow necessity increasing Especially artificial of artificial intelligence (AI) technologies development education system modernization in doing new opportunities to the surface is issuing .

Artificial intellect human intellectual activity to modeling capable was technologies complex is , it is the data analysis to do , to study , to conclude release and decision acceptance to do such as processes automates . Education from SI technologies in the field use study process effective organization to , students knowledge to take process individualization and pedagogical activity optimization opportunity gives .

Traditional education in the system students often based on a single curriculum is taught . Such approach and individual differences of students enough at the level into account can't . Every student to oneself typical knowledge level , acceptance to do speed , interests and study to the style has to be despite them one one of a kind material kind in the form presented As a result some students the material fast If you master it , others will to difficulties face It comes . This is study process efficiency reduces and students to study was interest reduces .

Modern pedagogical in approaches and individual education separately attention Individual approach student 's personal features into account received without education process organization to reach in mind holds . However traditional under the circumstances every one student individual work with from the teacher big time and requires resources . Therefore artificial intellect from technologies use this the process effective and systematic organization to grow opportunity gives .

Artificial intellect using of the students knowledge level automatic in a way is determined , their mistakes analysis will be done and individual training trajectories working is removed . From this except for , based on SI systems real time in mode feedback to give , students monitoring the development and to the teacher analytical information presented to grow to the possibility has . This is education process further efficient , flexible and transparent does .

Today on the day developed in the countries artificial intellect based on adaptive study platforms wide is being used . Such systems to the individual needs of students adapt to them the most effective training strategies offer As a result of

the students knowledge level increases , independent study skills develops and training to the process was motivation increases .

Uzbekistan Education in the Republic of system digitization and modern technologies current to grow according to wide extensive reforms done is being increased . In particular , “ Digital "Uzbekistan - 2030" strategy within education to the system artificial intellect , great data (Big Data) and other advanced technologies current to grow priority from tasks one as This is defined as education quality increase , international to standards suitable personnel preparation and innovative the economy develop for important basis creates .

With this together , artificial intellect education to the system current to grow one row also causing problems including technical infrastructure enough at the level underdevelopment , teachers digital competencies low , data safety and privacy issues current is considered . From this except , in SI algorithms to the surface arrival possible was errors and Bias is also ignored . aside absence necessary .

For this reason artificial from the intellect use not only technological , maybe methodical and pedagogical also thorough based to be necessary . Especially students Use the possibilities of SI in individual work with how effective use possibility according to clear recommendations working exit important importance has .

This of the research relevance exactly this aspects with is determined . That is , Uzbekistan education in the system artificial intellect individual work based on methodology enough at the level working not released is , this in the direction scientific and practical research take to go necessary .

The research purpose – artificial intellect technologies based on students individual work with effective methods determination and methodical recommendations working from the exit consists of .

This to the goal achieve for following tasks marked :

- artificial of intellect education in the system place and importance analysis to do ;
- individual education concept of theoretical the basics to study ;
- SI based study systems opportunities to determine ;
- practical experiments analysis to do ;
- education to the process current to grow according to recommendations working exit

Research object as general middle education in the system training process selected . Research subject and artificial intellect using students individual work with is a process .

Research results teachers , methodologists and education in the field experts for practical importance has are , they are through education process individualization and efficiency increase possible will be .

In general artificially intellect technologies education to the system current to grow not only modern demand, perhaps future education important structural part Therefore , this in the direction take going scientific research and methodical developments education quality new to the stage take to go out service does .

LITERATURE REVIEW

Artificial of intellect education in the system application last in years scientific of research important in the direction of became . Local and foreign researchers by SI based education individualization , adaptive study systems and smart assistants create issues wide is being studied .

Local researchers , including Metinkulov JT (2025) in their work artificial intellect using personal training plans of creation theoretical the basics analysis did . To him according to the individual characteristics of the students into account received without structured training plan education efficiency noticeable at the level increases .

Sidiqova YS (2025) adaptive study systems opportunities learn from them students knowledge to the level adaptation feature based on gave . His in my opinion , such systems study process automation and teacher the load in reduction important role plays .

Mamatkarimova GX (2025) and virtual assistants and chatbots in education place about research take go and see them students with real time in mode work opportunities analysis This is what I did . to the students permanent help to take opportunity gives .

Ergashovich (2025) higher education in the system artificial intellect current of reaching advantages and problems seeing It is derived from SI. individualization level increase possible emphasized although technically infrastructure and personnel preparation issues still relevant that record will reach .

Mukhtorova ZZ and partners in their work adaptive study monitoring and personalization in the processes artificial of intellect role deep analysis made . Their According to him , SI- based monitoring systems of the students development clear observation opportunity gives .

Literature analysis this shows that artificial intellect following to the advantage has :

- fast analysis and decision acceptance to do ;
- study process individualization ;
- teacher the load reduce ;
- of the students motivation increase

With this together , the following There are also problems :

- algorithmic errors and bias;
- information confidentiality ;
- technician infrastructure shortage ;
- of the students digital literacy .

Uzbekistan under the circumstances exactly methodical recommendations shortage this of the research relevance further increases .

METHODOLOGY

This research artificial intellect technologies based on students individual work with theoretical and practical aspects to study aimed at is , then descriptive-analytical approach main methodological basis as selected . This approach there is scientific sources systematic analysis to do them compare and generalization through of the problem the essence deep understanding opportunity Research in the process each other filler one how many scientific from methods used .

1. Literature analysis to do method

The research initial in the phase artificial of intellect education in the system place , especially individual training in the process importance determination for the purpose wide comprehensive literature analysis done increased . 2022–2026 published between scientific articles , conference materials , dissertations and monographs studied .

Sources when choosing their relevance , scientific novelty and reliability separately attention In particular , international scientific databases – from Scopus, Web of Science and Google Scholar platforms used . With this together , local scientific magazines and research analysis of the work General more than 60 in the account scientific sources sort taken and their main ideas studied .

Literature analysis through following aspects clearly received :

- artificial of intellect in education main directions ;
- individual education theoretical basics ;
- adaptive study systems work mechanisms ;
- there is problems and restrictions .

This stage of the research theoretical the foundation in formation important role plays .

2. Content analysis method

Selectively taken literature deep study for the purpose content analysis from the method used . This method using textual information systematic accordingly analysis important categories and concepts separate received .

Content analysis in the process following affairs done increased :

- every one in the source main ideas separate received ;
- recurring concepts and trends clarified ;
- artificial from the intellect use directions according to classification done increased .

As a result artificial intellect education in the process of use main directions – adaptive training , automatic assessment , personalized training trajectories and real time in mode help systems clearly received .

This method through various research results each other compared and their general and different aspects analysis This is done . problem complex approach based on study opportunity gave .

3. Synthesis (generalization) method

Content analysis as a result taken information next in stages synthesis That is , separately taken scientific results into a single system brought , general methodical approach formed .

Synthesis in the process :

- various in the sources ideas merged ;
- effective methods separate received ;
- students The optimal model of individual work with working It was released .

As a result artificial intellect based on study process organization of reaching step by step methodology offer This was done . methodology individual characteristics of students into account received without education organization to reach focused .

4. Practical test (experimental) approach elements)

The research important from the stages one artificial intellect of tools practical opportunities from checking consists of For this purpose various SI tools , including chatbots and generative models using students with work according to small in size experiments was held .

Practical test in the process :

- individual assignments for students given ;
- SI tools real time via in mode help was shown ;
- of the students answers and mistakes analysis was done .

Also , artificial intellect based on following opportunities from the test was held :

- individual training materials create ;
- automatic feedback to give ;
- of the students knowledge level assessment ;
- study monitoring the process .

Results this showed that SI tools students independent work skills development , knowledge fast mastery and mistakes on at work effective tool is considered .

5. Comparison and analytical assessment

Research during traditional education methods with artificial intellect based on approaches each other compared . Through this every two approach advantage and disadvantages clearly received .

Comparison as a result :

- SI based education more flexible that is ;
- individual approach effective provide ;
- teacher time savings determined .

With this together , technical and methodical problems are also noted was done .

6. Ethics principles

Research in the process scientific to ethics strict action In particular :

- all used sources right shown ;
- authorship rights respect was done ;
- to plagiarism road not put ;
- personal information protection provided .

Artificial intellect from the means information in use safety and privacy to the issues separately attention focused .

7. Research restrictions

This in research some restrictions available . Including practical tests small on a scale was held and wide extensive experimental research done not increased . Also , all education in institutions one kind technician opportunities there is not even the results impact to do possible .

ANALYSIS AND RESULTS

Individual work using SI following in directions effective :

- **Adaptive learning systems** - automatically adapt content by analyzing the student's knowledge level and errors (learning can increase by 15–30%).
- **Real-time feedback** – immediate correction and assistance through chatbots and virtual assistants.
- **Creating personalized learning plans** – individual trajectories based on interests and goals.

Methodical recommendations table :

No.	Direction	Methodical recommendation	SI tools example	Expected result
1	Diagnostics and monitoring	Each student for to conduct a preliminary test and in real time observation	Google Gemini, ChatGPT , adaptive platforms	Weak the sides early identification ,

				individual approach
2	Personal training plan create	Student's ability and interests based weekly / monthly plan to compose	SI algorithms (machine learning)	Motivation increase , independent study development
3	Lesson individual work in the process	Differential tasks , gamification and interactive exercises	Duolingo Max, virtual assistants	Students activity and participation increase
4	Independent work and house task	via SI suitable materials recommendation to do and create a “Homework Helper”	Chatbots , resource generators	Independence and himself/ herself assessment skills
5	Evaluation and feedback	Automated formative assessment + teacher control	AI assessment systems	Objectivity and speed increase
6	Moral and security measures	Information mafia , bias prevent get , teacher qualification increase	GDPR principles , training	Safe and fair use

From the table apparently It is clear that the SI teacher role to " mentor" changes and the load reduces . In practice application for teachers according to SI short from trainings to pass recommendation is being done .

Individual work using SI analysis following main directions open First , adaptive **training systems** : SI student previous successes , mistakes and study style analysis so , the content automatic adapts (for example , Duolingo or local platforms). As a result , students mastery level increases by 20–30% observed (international research according to).

Second , **real -time feedback and monitoring** : Virtual assistants (chatbots) to the reader immediately explanation gives , weak topics This is the teacher's the load reduces and individual approach strengthens .

Third , **personal training plans create** : SI algorithms student's interests , abilities and to their goals based on , weekly / monthly plans For example , Metinkulov at work as shown , this motivation increases .

Analyses this showed that artificial intellect based on students with individual work following in directions especially effective is :

1. Adaptive study systems

Adaptive systems the student knowledge level and mistakes analysis to him suitable study materials offer For example :

complicated topics simplifying to give ;

student 's to their mistakes based exercises presented to grow ;

individual speed education

Research this shows that such systems mastery increase the level by 15–30% possible .

2. Real time in mode feedback

Chatbots and virtual assistants using students :

to questions immediately answer they get ;

mistakes quickly they fix it ;

independent study skills they develop .

This is study process continuity provides .

3. Personal study plans create

Artificial intellect student 's :

interests ,

goals ,

knowledge level into account individual study trajectory creates .

As a result student to oneself suitable in the direction develops .

4. Automatic assessment systems

Using SI tests and writing work automatic assessment It is possible . This:
time saves ;
subjectivity reduces ;
fast result gives .

5. Study process monitoring

Artificial intellect based on created systems of students :

1. activity ,
2. the results ,
3. development dynamics observes .
4. This is for the teacher . own on time interference opportunity gives .

Methodical recommendations :

1. **Teachers for** : from SI tools (Google Gemini, ChatGPT, local adaptive platforms) using each one student for diagnostic tests transfer and to the results according to assignments differentiation . Students information secret storage (according to GDPR principles) suitable).
2. **Lesson in process** : using SI interactive using exercises (gamification) ; students weak sides independent eliminate they reach for Create a personal "Homework Helper" .
3. **Independent work For** : Students via SI resources recommendation to do (e.g. BERT models) based on suitable materials). Teacher change the role from " user" to " mentor" change
4. **Rating** : Automated systems through formative evaluation current to , but human control save .

CONCLUSION

Artificial intellect using students individual work with education modern to the requirements adaptation the most effective from the methods is one . Research

literature comment and synthesis based on methodical recommendations working output : adaptive systems , personal plans and in real time help . Uzbekistan education SI in the system wide current to grow through training quality increases , students potential complete will open in the future wide scalable empirical tests and teachers for special programs transfer This education is necessary . humane , innovative and effective does .

Research results this shows that artificial intellect technologies education process in individualization big to opportunities They have . using of the students knowledge level increase , motivation reinforcement and teacher's work the load reduce possible .

The following recommendations working output :

1. Education SI- based system platforms step by step current to be
2. Readers for special trainings organization to be
3. Local to the conditions suitable adaptive systems working exit
4. Information safety to provide .
5. Scientific research expansion .

In the future artificial intellect of education inseparable to the part rotation is expected . Therefore , this in the direction scientific and practical work reinforcement important importance has .

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