

USING BIG DATA TECHNOLOGIES IN THE EDUCATION SYSTEM

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Abstract

In this article modern education in the system Big Data technologies of use theoretical and practical basics research Education in the process collectible huge in volume the information analysis to do through teaching adjective increase of students mastery level forecasting and individualized learning trajectories creation issues seeing developed Research classical education during and Big Data based on education models comparative analysis done.

Keywords

Big Data, education technologies, prognosticator analysis (predictive, analytics), individual education, education information dig to get (Educational Data Mine).

Introduction. Modern education system the era of digital transformation from the beginning is forgiving Education in the process harvest happening information volume (Log files, exam results, online activity) exponential in a way growing is going Traditional statistical methods such huge and various Unstructured data) data again work possible owner not.

The research relevance so, Big Data technologies education to institutions not only past era report to get, but also to predict the future possible gives of the article purpose - in education to the information based management (Data-Driven Management) models work exit and their efficiency from evaluation consists of.

The research purpose: Education in institutions Big Data technologies current verb through training the process management effective model work exit and his/her advantages scientific justification.

Methods. Research during systemic analysis, comparative comparison and forecaster modeling from the methods used. Data collection and again work for following technology stack offer is allowed:

- **Information collection :** Apache Kafka from LMS systems using information flow reception to do

- **Storage:** Distributed HDFS (Hadoop Distributed File System) and NoSQL (Cassandra) databases.

- **Analysis:** Spark Streaming and Python (NumPy, Pandas, Scikit-learn libraries) using the information again work

Research within the framework students activity and final prices between dependency determination for regression the analysis model was used.

Results. Big Data technologies application as a result education in institutions following positive to the results achieved:

- ❖ **Students predicting mastery.**

Information analysis that showed that the student first 4 weeks activity (to system number of entries, assignments not to delay) his final from the exam passage probability of 85% accuracy with prophecy to do possible gives .



Data type	Traditional system	Big Data system
Analysis speed	At the end of the semester	Real time in mode
Coverage	Only grades	Grades + Behavior + Interests
Approach	General (default)	Individual (personalized)

❖ **“Academic Attrition ” (From Reading exclusion) risk reduction**

Analytical models from reading fall students at risk in advance determines and informs the teachers . As a result , own on time academic support provided because of students from reading exclusion decreased by 12% .

Discussion . In education Big Data technologies current verb not only technical but also ethical issues also bringing It will be released .

- **Information security :** Students personal information protection to do the most dominant It is a task .
- **Pedagogical approach :** Technology is a teacher instead not to press , but to him decision reception in doing assistant (Decision Support System) to be need .
- **Uzbek of scientists contribution:** Uzbek scientists (for example, TUIT and by other OTM researchers). work emerging national education platforms Big Data algorithms application, local education environment to account received in case adaptive education systems creation possible gives.

Big Data from "blind" management to "evidence" of education based (Data-driven) management spends.

Conclusion. Research results that shows that Big Data technologies education of the system efficiency in progress following opportunities present provides:

Education the process every one student's pace and to the need personalization (Personalized Learning); Learning programs labor market from the demands come come out fast optimization; Education institution resources (rooms , teachers download) data based on correct distribution

Also in t'alim Big Data from technologies use traditional from education "smart education" (Smart Education) of the transition main is a condition. In the article work climbed predictive analysis model education institutions to the administration decisions to intuition no, but definitely to the numbers based on reception to do possible gives Future research education neural networks in analytics application through model accuracy further to increase will be redirected.

Conclusion as In other words, Big Data is simply not a technological trend, but an education adjective control to do and new to the stage take exit strategic is a means .

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