

# **Generative AI in Education Market Forecasts to 2032 – Global Analysis By Deployment Mode (Cloud-Based Solutions and On-Premises Solutions), Application (Personalized Learning, Adaptive Learning Systems, AI-Powered Tutoring Systems, Content Generation and Curriculum Development, and Assessment and Feedback Mechanisms), End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Generative AI in Education Market is accounted for \$9.3 billion in 2025 and is expected to reach \$66.9 billion by 2032 growing at a CAGR of 32.5% during the forecast period. The Generative AI in Education market involves AI-driven tools and platforms that generate personalized learning content, assessments, simulations, and virtual tutors. It empowers educators to create adaptive curricula, automate grading, and support student engagement through AI-generated text, multimedia, and problem-solving resources. Adoption is rising due to advancements in large language models, demand for individualized learning, and digital education expansion. The market spans K-12, higher education, and corporate learning, enabling cost-effective, scalable, and data-driven educational experiences while improving learning outcomes and efficiency.

According to Stanford's Human-Centered AI Institute, generative AI tools like ChatGPT and Copilot are being used in over 30% of U.S. classrooms, aiding in personalized learning and content creation.

Market Dynamics:

Driver:

## Efficiency in Content Creation

Generative AI significantly enhances content creation in education by automating the development of personalized learning materials, assessments, and feedback. This automation reduces the time educators spend on administrative tasks, allowing them to focus more on teaching and student engagement. Additionally, AI-driven content can be tailored to individual learning styles and paces, promoting more effective and inclusive education. The scalability and adaptability of AI-generated content further support diverse learning environments, making education more accessible and efficient.

## Restraint:

### Ethical Concerns

The integration of generative AI in education raises significant ethical issues, including data privacy, algorithmic bias, and the potential for misuse. Educational institutions must ensure that AI systems are transparent, fair, and accountable to maintain trust and equity in learning environments. Moreover, the reliance on AI could lead to the erosion of human oversight in educational processes, potentially compromising the quality and integrity of education. Addressing these ethical concerns is crucial for the responsible adoption of AI technologies in education.

## Opportunity:

### Lifelong Learning

Generative AI presents a substantial opportunity for promoting lifelong learning by providing personalized, on-demand educational resources accessible to individuals at any stage of life. AI-powered platforms can adapt to learners' evolving needs, offering tailored content that supports continuous skill development and knowledge acquisition. This adaptability is particularly beneficial in rapidly changing industries where ongoing education is essential. By facilitating personalized learning journeys, AI can empower individuals to pursue education beyond traditional settings, fostering a culture of lifelong learning.

## Threat:

### Job Displacement

The widespread adoption of generative AI in education poses a threat to traditional educational roles, particularly in administrative and instructional support functions. AI systems capable of automating grading, content creation and tutoring may reduce the demand for human educators in certain areas. This shift could lead to job displacement and necessitate the reskilling of educational professionals to adapt to new roles that leverage AI technologies. Balancing technological advancement with workforce development is essential to mitigate potential negative impacts.

#### Covid-19 Impact:

The COVID-19 pandemic accelerated the adoption of generative AI in education as institutions transitioned to remote learning. AI technologies facilitated the creation of virtual classrooms, personalized learning experiences, and automated administrative processes, ensuring continuity in education during lockdowns. However, the rapid shift highlighted disparities in access to technology and raised concerns about the digital divide. Post-pandemic, the integration of AI continues to reshape educational practices, emphasizing the need for equitable access and ethical considerations in AI deployment.

The cloud-based solutions segment is expected to be the largest during the forecast period

The cloud-based solutions segment is expected to account for the largest market share during the forecast period due to their scalability, flexibility, and cost-effectiveness. These solutions enable educational institutions to deploy AI tools without significant upfront infrastructure investments, making advanced technologies more accessible. Cloud platforms also facilitate real-time updates and collaboration, enhancing the learning experience. The widespread adoption of cloud services in education further supports the growth of this segment, positioning it as a key driver in the market's expansion.

The AI-powered tutoring systems segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the AI-powered tutoring systems segment is predicted to witness the highest growth rate these systems offer personalized, on-demand tutoring that adapts to individual learning styles and paces, providing targeted support to students. The increasing demand for personalized education and the scalability of AI-driven tutoring solutions contribute to their rapid growth. As educational institutions seek

to enhance student outcomes, AI-powered tutoring systems are becoming integral components of modern learning environments.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share driven by significant investments in educational technology and a high rate of AI adoption. The presence of leading AI solution providers and educational institutions in the region fosters innovation and accelerates the deployment of AI tools in education. Additionally, supportive government policies and a strong digital infrastructure contribute to North America's leadership in the AI education market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Factors such as rapid digitalization, government initiatives promoting AI adoption, and a large student population drive the demand for AI-powered educational solutions. Countries like China, India, and Japan are investing heavily in AI research and development, positioning the region as a significant growth area for AI in education. The increasing focus on personalized learning further supports this growth trajectory.

Key players in the market

Some of the key players in Generative AI in Education Market include Amazon Web Services, Inc., IBM Corporation, Microsoft Corporation, Google LLC, Pearson PLC, BridgeU, DreamBox Learning, Inc., Carnegie Learning, Inc., Fishtree Inc., Anthology Inc., Squirrel AI Learning, Cognii Inc., Nuance Communications, Inc., Blippar, Century Tech, Querium Corporation, HowNow, KidSense.ai, Practically, and Docebo Inc.

Key Developments:

In September 2024, IBM Consulting partnered with Smarter Balanced to explore principled approaches for integrating AI into educational assessments.

In July 2024, AWS has developed scalable solutions using Amazon Bedrock and AI21 APIs to generate educational content, such as assignments and quizzes, and to provide grammatical corrections.

In September 2023, IBM announced a commitment to train two million learners in AI by

the end of 2026, with a focus on underrepresented communities. To achieve this goal at a global scale, IBM is expanding AI education collaborations with universities globally, collaborating with partners to deliver AI training to adult learners, and launching new generative AI coursework through IBM SkillsBuild. This will expand upon IBM's existing programs and career-building platforms to offer enhanced access to AI education and in-demand technical roles.

#### Deployment Modes Covered:

Cloud-Based Solutions

On-Premises Solutions

#### Applications Covered:

Personalized Learning

Adaptive Learning Systems

AI-Powered Tutoring Systems

Content Generation and Curriculum Development

Assessment and Feedback Mechanisms

#### End Users Covered:

K-12 Education

Higher Education Institutions

Corporate Training and Development

Government and Non-Governmental Organizations

#### Regions Covered:

## North America

US

Canada

Mexico

## Europe

Germany

UK

Italy

France

Spain

Rest of Europe

## Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

## South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

### Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

### Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

## Contents

### **1 EXECUTIVE SUMMARY**

### **2 PREFACE**

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
  - 2.4.1 Data Mining
  - 2.4.2 Data Analysis
  - 2.4.3 Data Validation
  - 2.4.4 Research Approach
- 2.5 Research Sources
  - 2.5.1 Primary Research Sources
  - 2.5.2 Secondary Research Sources
  - 2.5.3 Assumptions

### **3 MARKET TREND ANALYSIS**

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 End User Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

### **4 PORTERS FIVE FORCE ANALYSIS**

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

## **5 GLOBAL GENERATIVE AI IN EDUCATION MARKET, BY DEPLOYMENT MODE**

- 5.1 Introduction
- 5.2 Cloud-Based Solutions
- 5.3 On-Premises Solutions

## **6 GLOBAL GENERATIVE AI IN EDUCATION MARKET, BY APPLICATION**

- 6.1 Introduction
- 6.2 Personalized Learning
- 6.3 Adaptive Learning Systems
- 6.4 AI-Powered Tutoring Systems
- 6.5 Content Generation and Curriculum Development
- 6.6 Assessment and Feedback Mechanisms

## **7 GLOBAL GENERATIVE AI IN EDUCATION MARKET, BY END USER**

- 7.1 Introduction
- 7.2 K-12 Education
- 7.3 Higher Education Institutions
- 7.4 Corporate Training and Development
- 7.5 Government and Non-Governmental Organizations

## **8 GLOBAL GENERATIVE AI IN EDUCATION MARKET, BY GEOGRAPHY**

- 8.1 Introduction
- 8.2 North America
  - 8.2.1 US
  - 8.2.2 Canada
  - 8.2.3 Mexico
- 8.3 Europe
  - 8.3.1 Germany
  - 8.3.2 UK
  - 8.3.3 Italy
  - 8.3.4 France
  - 8.3.5 Spain
  - 8.3.6 Rest of Europe
- 8.4 Asia Pacific
  - 8.4.1 Japan

- 8.4.2 China
- 8.4.3 India
- 8.4.4 Australia
- 8.4.5 New Zealand
- 8.4.6 South Korea
- 8.4.7 Rest of Asia Pacific
- 8.5 South America
  - 8.5.1 Argentina
  - 8.5.2 Brazil
  - 8.5.3 Chile
  - 8.5.4 Rest of South America
- 8.6 Middle East & Africa
  - 8.6.1 Saudi Arabia
  - 8.6.2 UAE
  - 8.6.3 Qatar
  - 8.6.4 South Africa
  - 8.6.5 Rest of Middle East & Africa

## **9 KEY DEVELOPMENTS**

- 9.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 9.2 Acquisitions & Mergers
- 9.3 New Product Launch
- 9.4 Expansions
- 9.5 Other Key Strategies

## **10 COMPANY PROFILING**

- 10.1 Amazon Web Services, Inc.
- 10.2 IBM Corporation
- 10.3 Microsoft Corporation
- 10.4 Google LLC
- 10.5 Pearson PLC
- 10.6 BridgeU
- 10.7 DreamBox Learning, Inc.
- 10.8 Carnegie Learning, Inc.
- 10.9 Fishtree Inc.
- 10.10 Anthology Inc.
- 10.11 Squirrel AI Learning

- 10.12 Cognii Inc.
- 10.13 Nuance Communications, Inc.
- 10.14 Blippar
- 10.15 Century Tech
- 10.16 Querium Corporation
- 10.17 HowNow
- 10.18 KidSense.ai
- 10.19 Practically
- 10.20 Docebo Inc.

## List Of Tables

### LIST OF TABLES

Table 1 Global Generative AI in Education Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Generative AI in Education Market Outlook, By Deployment Mode (2024-2032) (\$MN)

Table 3 Global Generative AI in Education Market Outlook, By Cloud-Based Solutions (2024-2032) (\$MN)

Table 4 Global Generative AI in Education Market Outlook, By On-Premises Solutions (2024-2032) (\$MN)

Table 5 Global Generative AI in Education Market Outlook, By Application (2024-2032) (\$MN)

Table 6 Global Generative AI in Education Market Outlook, By Personalized Learning (2024-2032) (\$MN)

Table 7 Global Generative AI in Education Market Outlook, By Adaptive Learning Systems (2024-2032) (\$MN)

Table 8 Global Generative AI in Education Market Outlook, By AI-Powered Tutoring Systems (2024-2032) (\$MN)

Table 9 Global Generative AI in Education Market Outlook, By Content Generation and Curriculum Development (2024-2032) (\$MN)

Table 10 Global Generative AI in Education Market Outlook, By Assessment and Feedback Mechanisms (2024-2032) (\$MN)

Table 11 Global Generative AI in Education Market Outlook, By End User (2024-2032) (\$MN)

Table 12 Global Generative AI in Education Market Outlook, By K-12 Education (2024-2032) (\$MN)

Table 13 Global Generative AI in Education Market Outlook, By Higher Education Institutions (2024-2032) (\$MN)

Table 14 Global Generative AI in Education Market Outlook, By Corporate Training and Development (2024-2032) (\$MN)

Table 15 Global Generative AI in Education Market Outlook, By Government and Non-Governmental Organizations (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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