

# AI-Based Knowledge Assessment Market Forecasts to 2034 – Global Analysis By Component (Software and Services), Assessment Type, Question Type, Deployment Mode, Application, End User and By Geography

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## Abstracts

According to Statistics MRC, the Global AI-Based Knowledge Assessment Market is accounted for \$3.5 billion in 2026 and is expected to reach \$12.7 billion by 2034 growing at a CAGR of 17.4% during the forecast period. AI-based knowledge assessment refers to intelligent evaluation systems that utilize artificial intelligence to create, administer, score, and analyze tests across academic, professional, and certification contexts. These platforms employ natural language processing for essay grading, machine learning for adaptive question selection, computer vision for proctoring, and predictive analytics for outcome forecasting. The technology encompasses automated test generation, real-time plagiarism detection, and competency mapping tools. AI-based knowledge assessments serve educational institutions, corporations, government agencies, and professional certification bodies that seek an objective evaluation.

### Market Dynamics:

Driver:

Scalable evaluation needs

The growing need for scalable, consistent, and efficient evaluation across large learner populations is driving substantial adoption of AI-based knowledge assessment platforms. Educational institutions and corporations must assess thousands of

candidates simultaneously with standardized criteria. AI grading eliminates human rater inconsistency and fatigue-related errors. Automated assessment reduces administrative overhead and accelerates result delivery. The demand for continuous competency verification supports recurring assessment requirements.

Restraint:

#### Algorithmic bias risks

Concerns regarding algorithmic bias and fairness in AI assessment systems constrain market adoption and create regulatory scrutiny. Training data imbalances can produce discriminatory outcomes across demographic groups. The opacity of deep learning models complicates bias detection and remediation. Legal challenges to automated hiring assessments create liability exposure for corporate users. Academic integrity concerns arise when students dispute AI-generated scores without a transparent explanation.

Opportunity:

#### Formative assessment growth

The expanding emphasis on formative assessment throughout learning journeys creates significant opportunities for AI-powered continuous evaluation tools. Real-time feedback loops enabled by AI improve learning outcomes by identifying misconceptions immediately. Micro-assessments embedded within learning content reduce high-stakes testing anxiety. Analytics from formative assessment inform personalized instruction. The shift toward competency-based education requires frequent, low-stakes evaluation that AI efficiently delivers.

Threat:

#### Generative AI cheating

The proliferation of generative AI tools capable of producing human-like responses threatens the validity and security of traditional assessment formats. Students can leverage large language models to complete essays and coding assignments undetected. The arms race between cheating tools and detection algorithms creates ongoing uncertainty. Assessment providers must continuously invest in anti-cheating technology. The fundamental challenge of verifying authentic student work in an AI-

enabled world undermines confidence in remote assessment.

#### Covid-19 Impact:

The COVID-19 pandemic fundamentally transformed knowledge assessment by necessitating remote proctoring and automated grading solutions when physical testing centers closed. Educational institutions rapidly adopted AI assessment platforms to maintain evaluation continuity. The crisis accelerated acceptance of online credentials and digital verification. Post-pandemic, hybrid assessment models combining in-person and remote evaluation have become standard. Sustained investment in AI assessment infrastructure supports ongoing innovation in validity and security.

The services segment is expected to be the largest during the forecast period

The services segment is expected to account for the largest market share during the forecast period, due to the extensive professional services required for assessment design, psychometric validation, and implementation support. Organizations need consulting expertise to develop valid and reliable assessment instruments aligned with learning objectives. Psychometric services ensure statistical rigor in item analysis and score interpretation. Technical integration services connect assessment platforms with existing learning management and credentialing systems. Ongoing support services maintain assessment security and update item banks.

The formative assessment segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the formative assessment segment is predicted to witness the highest growth rate, driven by the pedagogical shift toward continuous evaluation and real-time feedback in educational and corporate training contexts. Formative assessment enables instructors to adjust instruction based on immediate learner performance data. AI automation makes frequent low-stakes evaluation economically feasible at scale. The integration of formative checks within digital learning content creates natural assessment touchpoints. Research demonstrating improved learning outcomes supports adoption.

#### **Region with largest share:**

During the forecast period, the North America region is expected to hold the largest market share, due to advanced educational technology infrastructure and high-stakes

testing requirements across the United States and Canada. Major assessment providers, including Pearson and ETS, maintain significant market presence. Corporate training markets demand sophisticated competency evaluation tools. Government certification programs require secure, scalable assessment platforms. Strong venture capital investment in EdTech assessment startups drives innovation.

### **Region with highest CAGR:**

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by expanding higher education enrollment and government investment in examination modernization across China, India, and Southeast Asia. National examination systems require scalable assessment solutions for millions of candidates. Growing corporate training markets create demand for professional certification assessments. Technology adoption in education accelerates faster than in mature markets. Partnerships between international assessment providers and local distributors facilitate market entry.

### **Key players in the market**

Some of the key players in AI-Based Knowledge Assessment Market include Microsoft Corporation, Alphabet Inc., IBM Corporation, Pearson plc, Educational Testing Service, Prometric LLC, Talview Inc., Mercer LLC, SHL Group Limited, Questionmark Computing Limited, ProctorU Inc., ExamSoft Worldwide, LLC, Gradescope, Inc., Codility Ltd., HackerRank, Inc., Mettl, and Criteria Corp.

### **Key Developments:**

In May 2026, Microsoft Corporation integrated advanced AI-powered proctoring and plagiarism detection technologies into its education suite, strengthening remote examination integrity, learner authentication, and institutional assessment security worldwide.

In April 2026, Pearson plc launched next-generation adaptive assessment algorithms designed to dynamically modify question complexity using real-time learner response behavior, improving personalized evaluation accuracy and engagement outcomes.

In March 2026, HackerRank, Inc. introduced AI-assisted code review capabilities that analyze programming submissions for logic efficiency, coding quality, and optimization performance beyond conventional test case evaluation methods.

### Components Covered:

Software

Services

### Assessment Types Covered:

Formative Assessment

Summative Assessment

Diagnostic Assessment

Competency-Based Assessment

Skills-Based Assessment

Psychometric Assessment

### Question Types Covered:

Multiple Choice Questions

Subjective and Essay Type

Coding and Simulation Based

Video and Audio Response

Case Study Based

### Deployment Modes Covered:

Cloud-Based

On-Premises

Applications Covered:

Academic Testing

Corporate Assessment

Professional Licensing

Language Proficiency Testing

End Users Covered:

Educational Institutions

Corporates

Government Bodies

Assessment Providers

Certification Bodies

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- 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

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