

## Table of Contents

Metaari’s Organizational Enterprise Licensing Model.....	2
List of Tables.....	7
List of Figures .....	8
About Metaari.....	9
About the Analyst .....	9
Metaari's Definition of AI-based Learning .....	11
Executive Overview: The Holy Grail is Achieved.....	12
Overview of the Primary Catalysts Driving the Global AI-based Learning Market .....	17
Barriers-to-Entry are Now Quite Low .....	19
The Holy Grail: AI-based Learning Delivers True Personalized Learning at Scale .....	20
Solving the 2 Sigma Problem .....	21
The Floodgates are Open: Private Investment Flowing to AI-based Learning Startups .....	23
Assistance Intelligence: Innovations in AIs in the Healthcare Sector are Major Catalysts for AI-based Learning .....	23
Use of Therapeutic AIs for People with Special Needs.....	24
AI-based Coding Tutors and Tutoring Robots for Kids.....	26
Growing Use of Intelligent Tutors in the Academic Segments .....	26
Uptake of AI-based Learning in the Corporations and Government Agencies .....	27
What You Will Find in This Report .....	28
Where are the Buyers?.....	29
Who are the Buyers?.....	31
What are They Buying? .....	33
Sources of Data on the Global AI-based Learning Market .....	35
Analysis of the 2019-2024 Global AI-based Learning Market.....	43

Over 940 suppliers operating in 126 countries are cited in this report to help international suppliers identify local partners, distributors, resellers, and potential merger and acquisition (M&A) targets.

## Metaari's 2019-2024 Global AI-based Learning Market

Detailed Demand-sided Analysis of the Primary Catalysts Driving the Global Commercial AI-based Learning Market .....	43
Barriers-to-Entry are Now Quite Low .....	44
Pretrained AI and Bot Marketplaces Hit the Market.....	45
Prebuilt Bot Templates for Sale.....	47
AI-based Learning: The Holy Grail of Personalized Learning .....	48
Metaari's Artificial Intelligence Array .....	49
The Human in the Loop is Indispensable with Augmented Intelligence .....	51
Cognitive Computing .....	52
Now It Is Personal: Natural Language Processing is the Core of Today's AI-based Learning .....	53
NLP Relatives .....	56
Machine Learning and Deep Learning .....	57
Opening the Black Box: Explainable AI and Transparent AI.....	58
Self-Learning Avatars Getting Smarter All the Time .....	60
How to Train Your AI: Training AI-based Learning can be Complex and Expensive.....	61
Spike in Private Investments Going to AI-based Learning Companies..	64
AI Innovations in Healthcare Major Catalysts for AI-based Learning ...	70
Virtual Healthcare Advisor/Assistant Firms Attracting Significant Investment .....	78
Cognitive Health and Wellness Bots .....	83
The Use of AI-based Learning for People with Special Needs.....	84
Consumer Demand for AI-based Learning is now Quite High in Developed Countries .....	88
AI-based Coding Tutors and Robot Tutors for Kids.....	88
Social and Emotional Bots for the Elderly Gain Traction.....	90
Academic Institutions Adopting Intelligent Tutoring Avatars.....	91
Uptake of AI-based Learning in the Corporations and Government Agencies .....	93
Global Demand-side Analysis by Eight Buyer Segments (For All Seven Regions Combined) .....	93
Consumers.....	94
PreK-12 Schools .....	98
Higher Education (Tertiary).....	108

## Metaari's 2019-2024 Global AI-based Learning Market

Federal Government Agencies.....	115
Local/ State/Provincial/Prefecture Government Agencies.....	122
Corporations and Businesses .....	126
Worldwide Demand-side Analysis by Seven Regions .....	139
Africa .....	140
Nigeria .....	141
Kenya.....	142
South Africa.....	143
Asia Pacific .....	144
New Zealand .....	148
Australia.....	149
South Korea Leads the 2019 Market in the Region .....	151
Japan .....	154
China Will be the Top Buying Country in Asia by 2024.....	157
India is the Fastest Growing Market in the Asia Pacific Region .....	168
Eastern Europe.....	175
Latin America .....	178
The Middle East.....	182
Turkey.....	184
Egypt.....	184
Israel .....	185
UAE.....	187
North America .....	189
The United States.....	190
Canada .....	195
Western Europe.....	197
The Netherlands.....	198
Poland .....	199
Austria.....	200
Italy .....	201
Spain .....	202
Ireland.....	204
Germany .....	206
France .....	208
The United Kingdom (UK).....	210
The Nordic Cluster.....	216

# Metaari's 2019-2024 Global AI-based Learning Market

Finland .....	216
Sweden .....	218
Denmark .....	219
Norway .....	221
Iceland .....	223
<b>Worldwide Supply-side Analysis by Three AI-based Learning Products and Services .....</b>	<b>224</b>
<b>Packaged Retail AI-based Learning Products .....</b>	<b>225</b>
Adaptive Humanoid Education Robots now in Wide Use .....	227
AI-based Learning for Early Childhood Learning .....	231
AI-based Personal Fitness and Wellness Coaches a Hit with Consumers	233
AI-based Language Learning Apps in High Demand Across the Globe	235
Interactive Conversational AI Avatars Take Root in the Agencies ...	240
AI-based Coaches Catch on in the Corporate Segment .....	243
Digital Twins: AI Business Simulations are the Sweet Spot for Suppliers .....	247
AI-based Helpdesk: The New Procedural Manual .....	249
<b>Custom AI-based Learning Development Services .....</b>	<b>252</b>
The Humanoid Educational Robot Services Providers .....	253
Conversational AI-based Learning Providers .....	256
<b>Rapidly Lowering the Barriers-to-Entry: AI-based Learning Authoring Tools and Platforms .....</b>	<b>259</b>
Low-Code and No-Code Tools Level the Playing Field .....	270
Accelerating Rapid Development: AI Tools, Platforms, and Data Marketplaces .....	273
Astonishing Location Intelligence and Geospatial Technology Innovation .....	275
Amazing Innovation in AI-based Emotion Intelligence (Emotion IQ)	277
Incredibly Intelligent Performance and Decision-Support Tools and Platforms Hit the Market .....	280
Fundamentally New AI-based Learning Tools: All Along the Knowledge Graph .....	284
AI-based Knowledge Management Platforms Morph into Insight Engines .....	288
<b>Index of Suppliers .....</b>	<b>298</b>

## List of Tables

Table 1 - The 126 Countries across the Seven Regions Tracked by Metaari	29
Table 2 – 2019-2024 Global Commercial AI-based Learning Market Revenue Forecast (in US\$ Millions) .....	43
Table 3 – AI-based Learning Companies that Raised over \$50 Million in 2018 .....	65
Table 4 - 2018 Investments in AI-based Learning Companies by Country	66
Table 5 - 2019-2024 Global AI-based Learning Market by Six Buyer Segments (in US\$ Millions) .....	94
Table 6 - 2019-2024 Global Consumer AI-based Learning Revenue Forecasts (in US\$ Millions).....	95
Table 7 - 2019-2024 Global PreK-12 AI-based Learning Revenue Forecasts (in US\$ Millions).....	98
Table 8 - 2019-2024 Global Higher Education Commercial AI-based Learning Revenue Forecasts (in US\$ Millions).....	108
Table 9 - 2019-2024 Global Federal Government AI-based Learning Revenue Forecasts (in US\$ Millions).....	116
Table 10 - 2019-2024 Global Local and State Government AI-based Learning Revenue Forecasts (in US\$ Millions).....	122
Table 11 - 2019-2024 Global Corporate AI-based Learning Revenue Forecasts (in US\$ Millions).....	126
Table 12 - 2019-2024 Global AI-based Learning Revenue Forecasts by Seven Regions (in US\$ Millions).....	139
Table 13 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for Africa (in US\$ Millions).....	140
Table 14 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for Asia Pacific (in US\$ Millions) .....	145
Table 15 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for Eastern Europe (in US\$ Millions) .....	175
Table 16 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for Latin America (in US\$ Millions) .....	179
Table 17 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for the Middle East (in US\$ Millions) .....	182

Table 18 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for North America (in US\$ Millions).....189

Table 19 - 2019-2024 Commercial AI-based Learning Revenue Forecasts for Western Europe (in US\$ Millions).....197

Table 20 - 2019-2024 Global Revenue Forecasts for Three Types of AI-based Learning Products and Services (in US\$ Millions).....224

Table 21 - 2019-2024 Global Revenue Forecasts for Pretrained Packaged Retail AI-based Learning Products (in US\$ Millions).....226

Table 22 - 2019-2024 Global Revenue Forecasts for Custom AI-based Learning Development Services (in US\$ Millions) .....252

Table 23 - 2019-2024 Global Revenue Forecasts for AI-based Learning Authoring Tools and Platforms (in US\$ Millions).....259

## List of Figures

Figure 1 – Primary Catalysts Driving the Global AI-based Learning Market .....18

Figure 2 – Cognitive Tutors Can Exceed the 2 Sigma Shift .....22

Figure 3 – 2019-2024 AI-based Learning Growth Rates by Seven Regions30

Figure 4 – 2019-2024 Global AI-based Learning Market by Six Buyer Segments.....31

Figure 5 - 2019-2024 Global AI-based Learning Growth Rates by Three Products and Services .....33

Figure 6 - Metaari's Actionable Competitive Intelligence Methodology..36

Figure 7 – Metaari's Artificial Intelligence (AI) Array .....50

Figure 8 – Metaari's Classification of Education and Training Conversational AIs.....54

Figure 9 – Unique Catalysts China's AI-based Learning Market.....158

Figure 10 –The Major Trends Driving the Demand for AI-based Learning Content.....227

Figure 11 – Market Factors Driving Need for Custom AI-based Learning Services.....253

Figure 12 – The Perfect Storm: The Major Catalysts Driving the Market for AI-based Learning Tools and Platforms.....270