Metaari’s 2019-2024 Global AI-based Learning Market

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

For More Information About This Research, eMail research@metaari.com

pg. 3
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

For More Information About This Research, eMail research@metaari.com
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

For More Information About This Research, eMail research@metaari.com
Metaari’s 2019–2024 Global AI-based Learning Market

Finland ................................................................. 216
Sweden ................................................................. 218
Denmark ................................................................... 219
Norway ..................................................................... 221
Iceland ..................................................................... 223

Worldwide Supply-side Analysis by Three AI-based Learning Products and Services................................................................. 224

Packaged Retail AI-based Learning Products.............................................. 225
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 Consumers233
AI-based Language Learning Apps in High Demand Across the Globe235
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

Custom AI-based Learning Development Services .......................... 252
The Humanoid Educational Robot Services Providers ............... 253
Conversational AI-based Learning Providers ......................... 256

Rapidly Lowering the Barriers-to-Entry: AI-based Learning Authoring Tools and Platforms ..................................................... 259
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

Index of Suppliers ........................................................................ 298

For More Information About This Research, eMail research@metaari.com
List of Tables

Table 1 - The 126 Countries across the Seven Regions Tracked by Metaari

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 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

For More Information About This Research, eMail research@metaari.com
Metaari’s 2019-2024 Global AI-based Learning Market

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

For More Information About This Research, eMail research@metaari.com