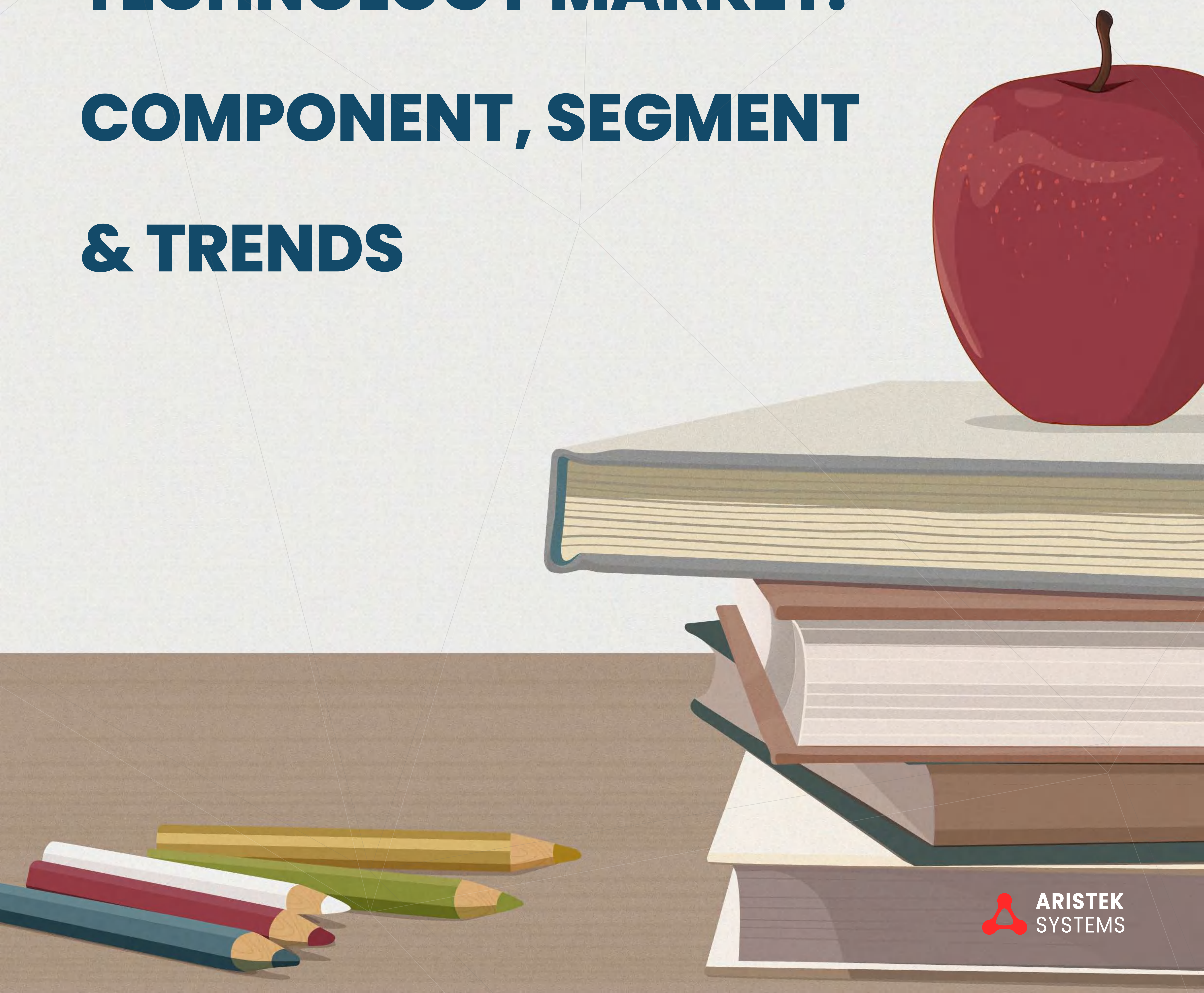


2022

# **A GUIDE ON K-12 EDUCATIONAL TECHNOLOGY MARKET: COMPONENT, SEGMENT & TRENDS**





# INTRODUCTION

As the K-12 market continues to grow, this whitepaper explores the drivers of its growth - software vendors and stakeholders. It highlights the after-effect of COVID-19 on the trend and growth of the market.

The needs of educational institutions are also taken into account and how the software vendors are developing features to satisfy them.





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# K-12 MARKET: MAIN COMPONENTS AND FUNCTIONS

**K-12 is the abbreviated term for Kindergarten to 12th grade in some nations including the United States of America, New Zealand, Canada et al. The term shows the entirety of primary or basic to secondary education in these nations for school grades – that is usually supported by the public – preceding college, and it encompasses elementary and secondary education as well.**



However, the extension of K-12 stretches farther than the scope captured above to include colleges and universities and how they employ software primarily targeted at the K-12 market. But you get the stint of this later on. For now, starting from the body of the K-12 technology before following its different branches to whatever limits they may stretch. Starting with the first set of divisions, we have the K-12 components.

Components that fit into the K-12 mould are schools that are steadily transitioning from the traditional blackboard & chalk and whiteboard & marker to smart technological approaches to learning. These approaches are seen in forms such as smart boards and robots, and others that support the remote environment as a result of the COVID-19 pandemic – this also increased the growth of the market and the Compound Annual Growth Rate of the K-12 Education Market proposed to hit 31.6% between 2021 and 2026



# THE FOCUS OF K-12, TECHNOLOGY, AND COVID-19

**As hinted earlier, the COVID-19 grew another part of remoteness and urgency of service rendering to become key trends in the K-12 market and other markets.**

A good off-K-12-market example is the virality of Tik-Tok in the entertainment market which is currently cutting across other markets as a means of connecting with an audience or community. In the same vein, The K-12 Educational Market is focusing on the speed and accessibility of K-12 core fields which is STEM.

**STEM, which stands for Science, Technology, Engineering, and Mathematics is growing with new opportunities emerging in its various fields. Additionally, students with outstanding grades in these fields attain admission into college or high institutions easily, hence, bringing the three main determinants - investors, students, and parents - to further hammer the spread of basic STEM studies in K-12 schools across the globe.**

Technology is a significant component and standard of every market. And with the immense availability of data for learning analytics at no time, referred to as Big Data, education at K-12 levels are being personalised for students.



The use of AI and robots also apply in this market to aid pedagogues or a replacement in their absence as in the case in South Korea where a robot named Robosem is teaching the English Language in areas without professional pedagogues.



COVID-19 did not bring a new normal of working remotely to the labour market alone but learning as well. And with 1.3 billion learners getting stuck at home without school as of March 23, 2022, according to UNESCO, it became the advent of the K-12 Education market growth surge.

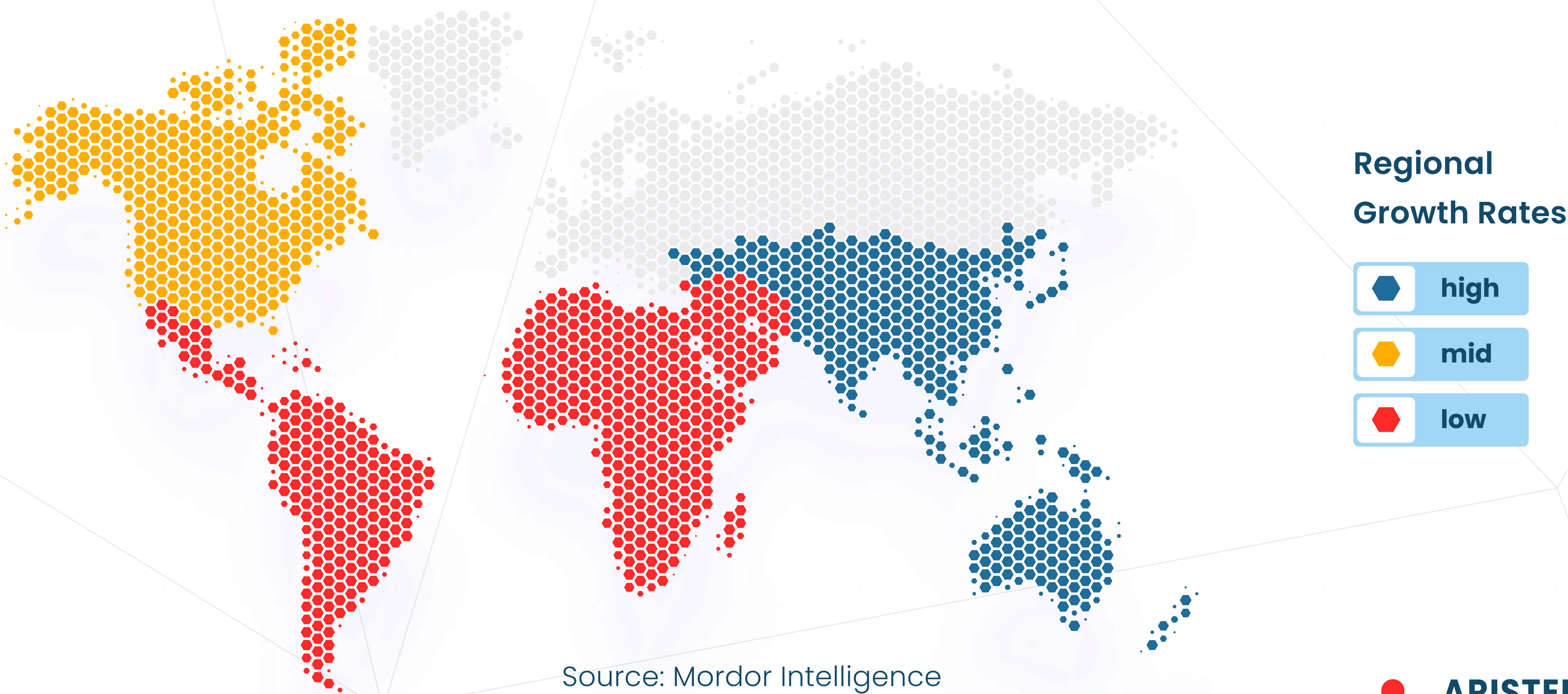
Also, in the face of the current K-12 realities, governments across the globe are moving towards providing education of better quality.

“  
**A NATION WITH A SIGNIFICANT STEP IN THIS DIRECTION IS SAUDI ARABIA.**  
”

The nation has included in its “Vision 2030” to allocate an increased share of 25% to private education by 2030. To drive global private K-12 providers, the nation is allowing foreigners to own businesses fully, thereby ameliorating ownership restrictions on foreign firms, which were initially co-owned by locals.

This move by Saudi Arabia shows their willingness to increase the K-12 market in the region which is low as seen in the infographic below. Australia and most of Asia are ahead of other continents while North America and Western Europe have mid-level markets. Africa and South America have low market levels and there is no substantial data from most of Eastern Europe and the freezing Antarctica.

**K-12 Education Market – Growth Rate by Geography (2020–2025)**





# WHAT DO SOFTWARE COMPANIES DO FOR THE K-12 MARKET?

## SOFTWARE VENDORS AND K-12 EDUCATION MARKET REQUIREMENTS

The K-12 market is fed by two technology vendor types: The Education Technology companies and The Technology companies.

### EDUCATIONAL TECHNOLOGY COMPANIES

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Companies with focus on creating EdTech software solutions (abbreviated from the name) for schools and other institutions in the K-12 market.

**Examples: McGraw Hill Education, Pearson Education Inc, etc.**

### TECHNOLOGY COMPANIES

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Companies that are not peculiar to the education industry but create software solutions that are utilized by educational institutions

**Examples: SAP, Oracle, etc.**

**\$4.3  
BILLION**

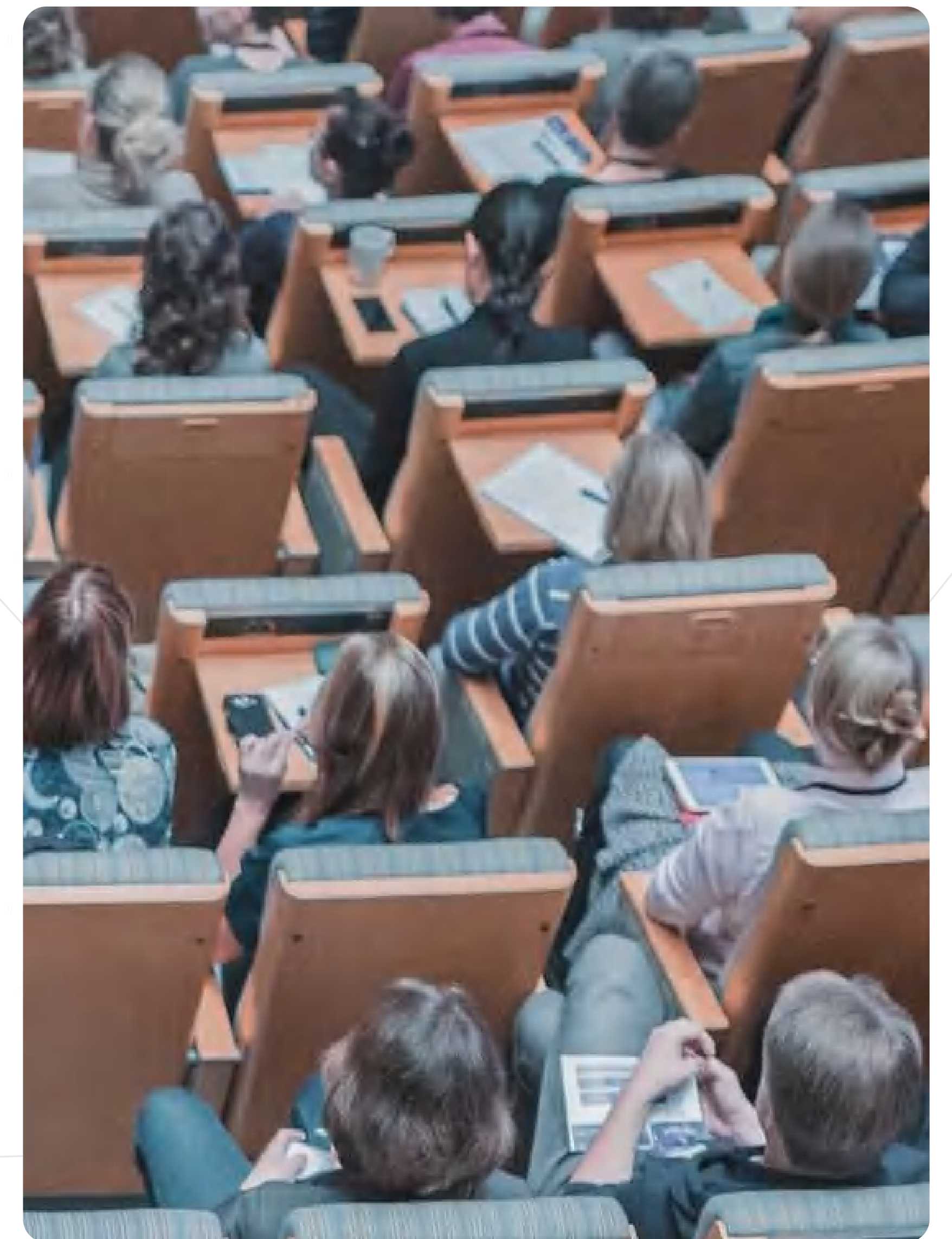
Fed by these two types of tech companies, the K-12 market keeps getting bigger and as at the end of 2020, the top 10 K-20 Tech Software vendors garnered almost \$4.3 billion in K-12, maintenance, licence and revenues growing the 41.5% of the Global K-12 applications market by 17.1% for the year.



# HERE ARE SOME EDTECHS:

## Blackbaud.

Blackbaud has many products that fit into the K-12 market including the Blackbaud Award Management for **improving student access to scholarship funds, automating donor reporting** and enhancing cross-functional visibility; Blackbaud Enrollment Management System is one solution to **seamlessly connect all aspects of the admission process**; and others.



In addition, Blackbaud acquired Everfi that provides schools with **digital courses and game-based digital lessons for learners** in fields such as Health and Wellness, History, Financial Literacy, College- and Career Readiness, and others.



## Black Board.

Blackboard has products that are fully optimized for the **virtual learning environment** regardless of the device or channel used. Blackboard took a huge leap further with a merger with Anthology in 2021. Anthology provides higher education software solutions to **support the entire learning lifecycle**. Also, during the pandemic in 2020, Blackboard launched its holistic **remote learning solution** for K-12 named Blackboard Unite.



## Frontline Education●

The company provides **school administration software**, connecting solutions for student and special programs, business operations and human capital management with powerful data and analytics to empower educators.



In June of the same year, Frontline Education acquired Hayes Software Systems (Hayes). It provides solutions for K-12 schools on **asset management and inventory control with integrated help desk capabilities** for relating with customers which can be a Guardian or parent in this case.



## Imagine Learning●

Imagine Learning is an individualized, multimodal language and literacy software program designed to help English learners, struggling readers, students with disabilities, and early childhood education students master essential reading and speaking skills from Pre-K school through Sixth Grade with the help of **games and interactive lessons**.

## Follett School Solutions (FSS)●

Since 1837 has been trusted as a source that **tracks student information and combines with invested resources to curate required books**, tools and resources to elicit the potential of students, and technology is making the company better at this with over 75,000 K-12 FSS'library Management System installations worldwide.



## McGraw Hills, K-12 Inc and Pearson Education●



Unlike vendors, McGraw Hill is focused on **providing solutions for learners, administrators, parents and pedagogues directly**. And this is the same for Pearson Education Inc and K12 Inc. While Pearson focuses on learners, Teachers, and Practitioners, K12 Inc puts the power in the hands of the learners with personalized tools and resources made available. K12 Inc. also runs a college- and career readiness program.

## PowerSchool Group LLC●

The company provides software and cloud-based solutions for K-12 to actualize simpler school processes and better educational outcomes. In 2021 PowerSchool acquired Kickboard that provides **education behaviour management** for K-12.





# ITECH COMPANIES:

These are the general tech companies that do not create software specifically for the K-12 market but their software helps to strengthen security aspects and private information protections, and also enhance learning.



## Oracle●

Oracle cloud is allowing K-12 school systems with **data management, finance streamlining, and Human Resource management**. Oracle aids them to do these efficiently while reducing cost and workload. This way the schools have to worry less about jeopardizing their pre-pandemic education quality.



## Microsoft.

Microsoft is the leading K-12 software solutions provider with Microsoft 365 and Teams at the forefront. These allow **assessments, conversations, and content to be in one secure hub** for easy class management and **promotion of student engagement**. To show its huge coverage, only Teams garners over 13 million active users daily and 19 million active users weekly.



## SAP.

After realizing increasing interest in Virtual and Augmented reality, SAP, a tech company, launched a **VR program** named Skill Immersion Lab. The Lab would teach teenagers and young adults skills including leadership, networking, communication, and teamwork skills required for the workforce.





While most of the companies seem to focus on features including Student Information System, Enrollment Management System, Learning Management, there are investments in other features including Fund Accounting System, K-12 Administration, Financials, HR, Procurement.

There are a significant number of companies creating software to make the K-12 market better.

Also, the preference for mobile technology has hit the K-12 market and there are investments towards adapting features to the mobile trend.



# K-12 MARKET NEEDS: BUYER SIDE

From the perspectives of the institute-academic or non-academic-purchasing software solutions from EdTech vendors, the funds are investments in K-12. The investments are seen in the form of required capabilities and functions needed by the buyer to replace its current legacy systems without losing core values. In the light of the fact that the K-12 Education Technology market is growing exponentially, the investments are envisioned to make a significant impact on the buyer's share of the market in the future.



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**SCHOOLS IN THE UNITED STATES SPEND MORE ON THE EDTECH SOFTWARE WITH AMOUNTS RUNNING INTO BILLIONS OF DOLLARS PER INSTITUTION IN 2020.**

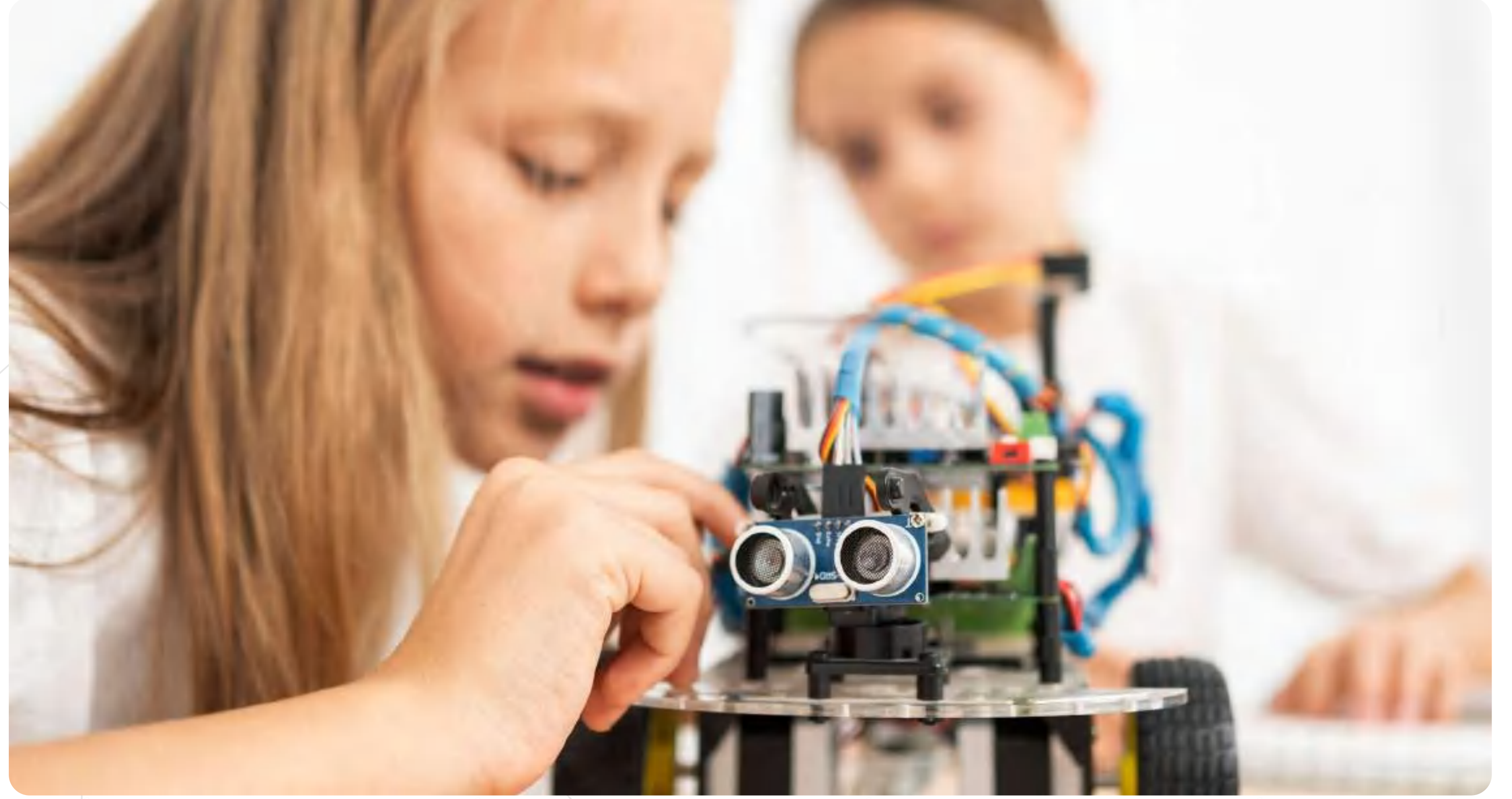
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And the major features they focused on were **Enterprise Resource Planning (ERP)** and **Human Capital Management (HCM)** which includes workforce management. Hence, we have Minnesota State Colleges and Universities, Ithaca College, Kentucky State University patronizing Oracle; Paul Smith's College and Stratford University patronizing Microsoft.





Other schools in the US with peculiar needs like Stanford University spent \$4.1 billion on Fraud and Compliance Solutions FICO while the University of Virginia spent 1.39 billion on Data Visualization Software from Qlik.



Schools in the United Kingdom also spent more on Enterprise Resource Planning and some of them and the respective vendors include Manchester Metropolitan University, Dublin Business School, Buckinghamshire New University, University of London, and Wellcome Trust Sanger Institute from UNIT 4, a software vendor. Wellcome Trust Sanger Institute also patronised Tableau for Business Intelligence and Analytics.

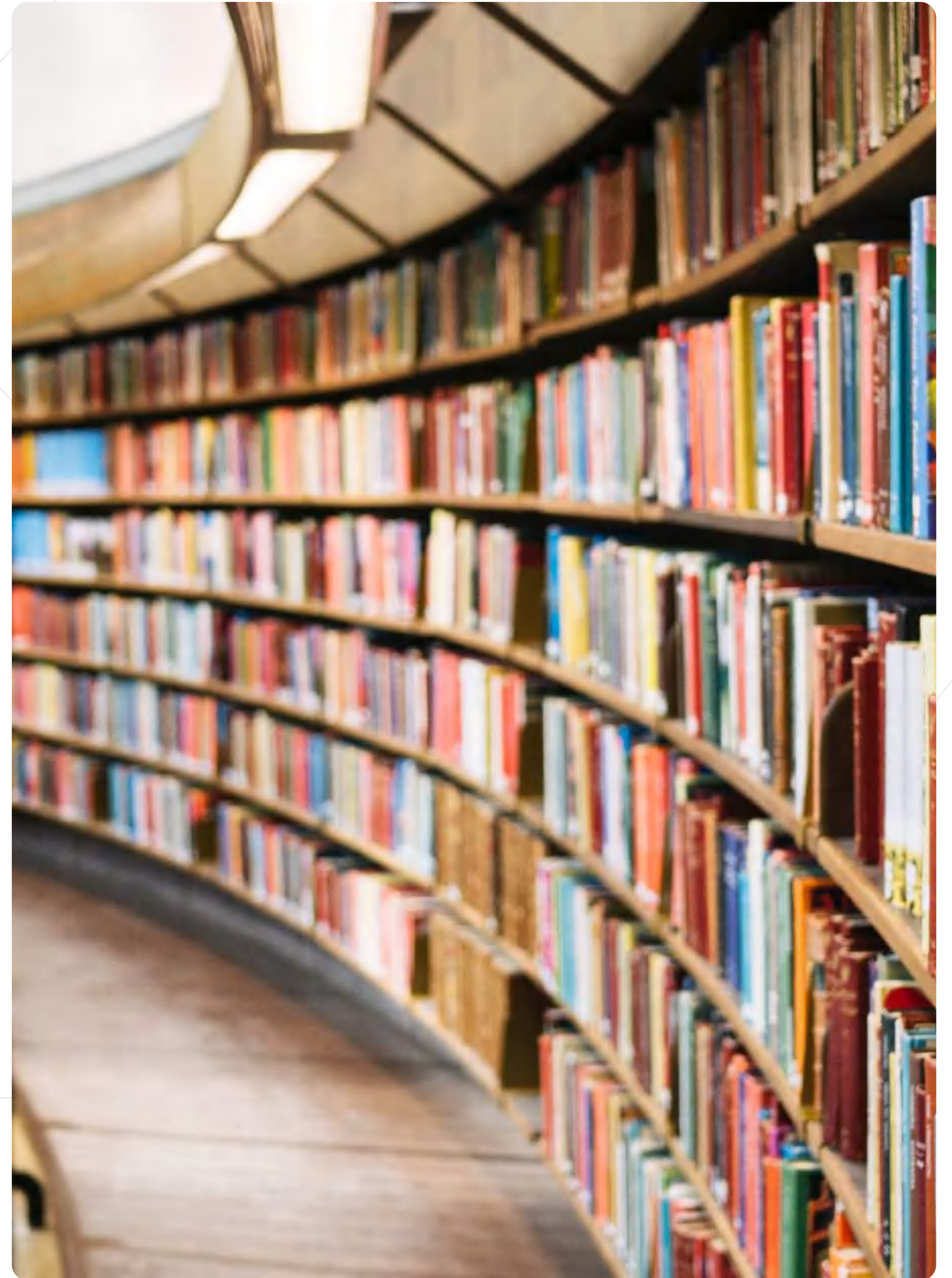


Though the Swiss Education group of Switzerland and the University of Petroleum and Energy Studies of India also focused on the Enterprise Resource Planning, schools in other countries including Saxion University of Applied Sciences, Netherlands and InterGroupo,

Columbia focused on Web Content Management and IT Service Management. However, the United States remains the most diverse with a school, the University of Georgia, using the Web Content Management from Adobe Systems.



Though with a significant gap in the number of EdTech features employed, Australia ranked third after the United States and the United Kingdom with three features--Human Capital Management, Talent Management, and Customer Service and Support. Schools in other countries and the features employed are as follows: University of Tokyo, Japan – Project Portfolio Management; Wellcome Trust Sanger Institute, Canada – Enterprise Resource Planning; Faculdade Sumaré, Brazil – Enterprise Performance Management.



#### **OTHER FUNCTIONS SCHOOLS WORLDWIDE EMPLOYED EDTECH SOFTWARE FOR ARE:**

- Content Management
- Learning Management systems,
- Customer Relationship Management,
- Project Portfolio Management,
- Business Intelligence, Procurement,
- Enterprise Performance Management,
- Enterprise Performance Management,
- Financial Management, Project
- Management Software, Customer
- Service and Support, Customer
- Experience Platform, Collaboration,
- Payroll, Talent Management, Analytics, Platform.





**K-12 and Higher institutions require features to manage humans and curate content amidst other learning and administrative work.**

**K-12 can also gain insight from these on the EdTech vendors to use to prepare learners for college and careers.**



# COMMON EXPECTED TRENDS OF THE K-12 EDUCATION TECHNOLOGY MARKET

## INCREASED ADOPTION IN THE ACADEMIC AND NON-ACADEMIC SECTORS

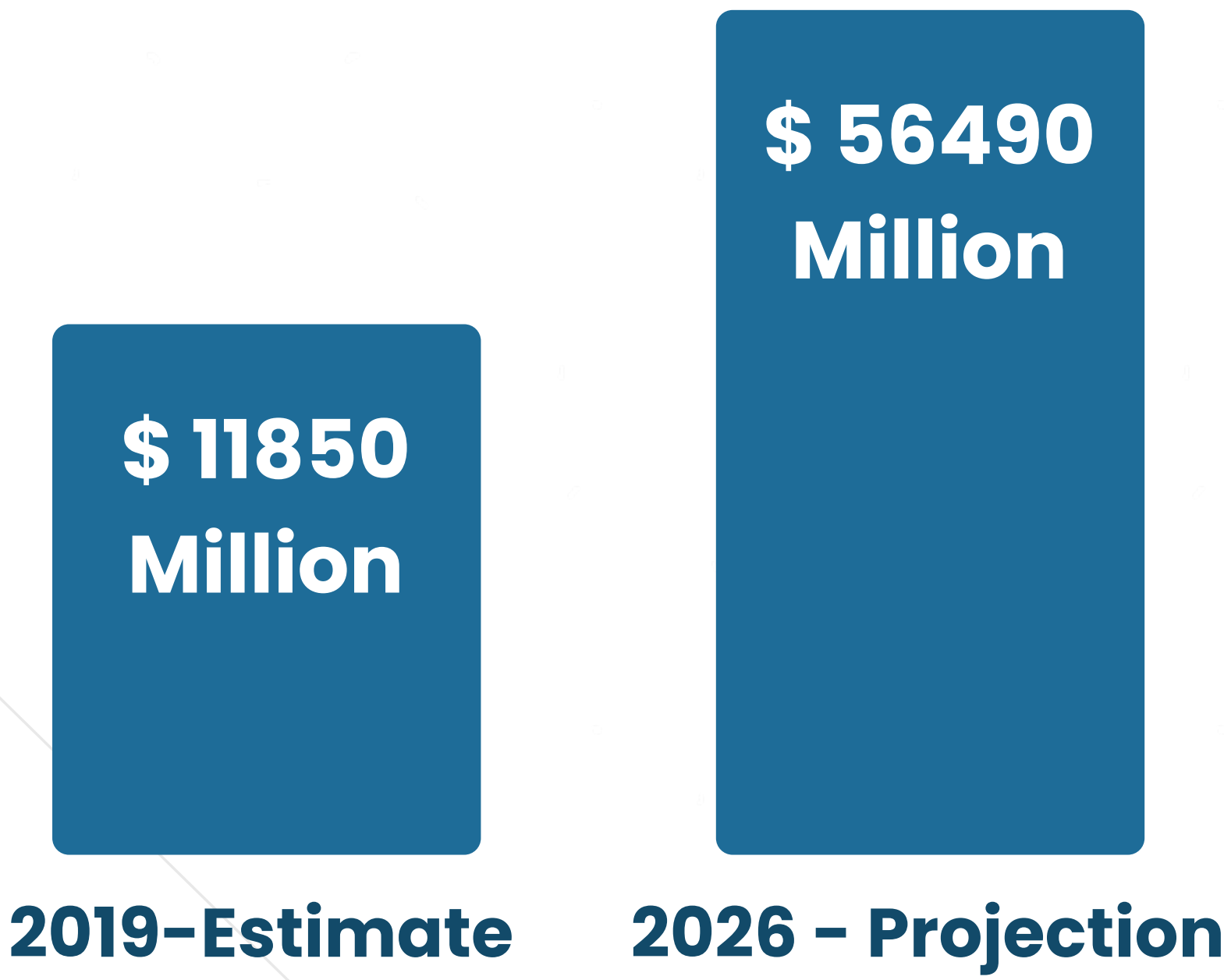
Academic and Non-Academic sectors are differentiated by their environments. While Academic is limited to academia including colleges, universities and related, Non-academic sectors include environments outside of the academia including business environments, Support groups and NGOs, etc.

However, there are environments where these two sectors overlap such as mental health support groups in a University or an NGO for the education of people with Autism.

**\$56490  
MILLION  
BY 2026** ●

### K-12 Education Technology Market

Projected to grow at a CAGR of 25%



Source: Aluates Reports

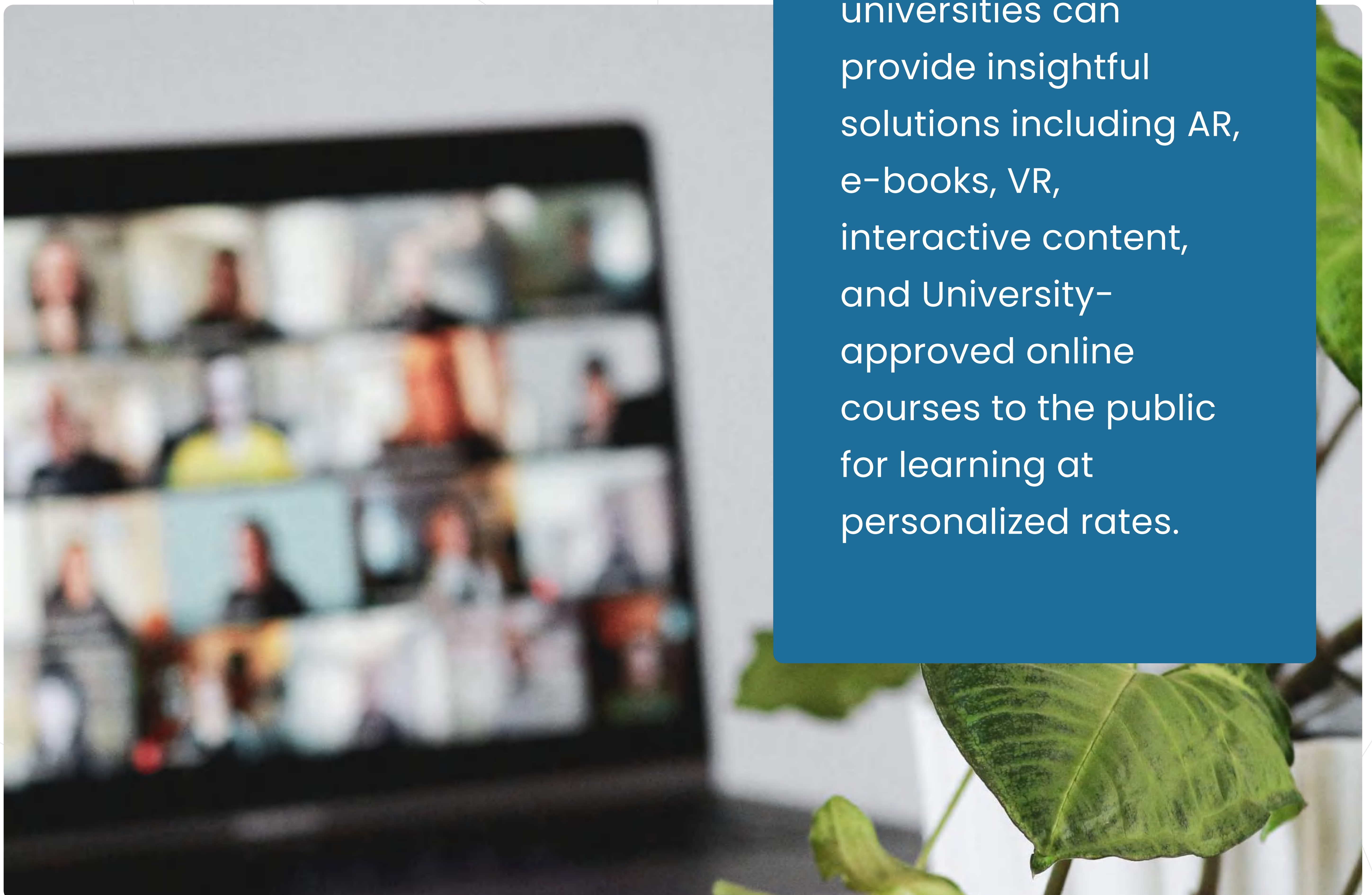
For various reasons that have been highlighted in earlier parts of this whitepaper, Academic and Non-Academic institutions are increasingly adopting Education Technology (EdTech) tools, thereby driving the growth of the K-12 EdTech market. And by 2026, the K-12 market is expected to grow from USD 11850 in 2019 to USD 56490 Million by 2026, while maintaining a CAGR of 25.0 %.



EdTech Software such as Customer Relationship Management (CRM) and Learning Management Systems (LMS) are being used in academic and non-academic institutes to manage customers, enquiries, enrolment etc. These software solutions help institutes attain operational efficiency. EdTech software is also being adopted for business environments such as in sales automation for efficient analysis of immense volumes of data for better customer service.

**THIS ADOPTION BY A MAJOR SECTOR (SALES) THAT CUTS ACROSS OTHER SECTORS WILL GIVE EDTECH THE BOOST TO REACH THE 2026 PROJECTED TARGET.**

Still, in the academic sectors, some educational institutions and foremost universities in North America are significantly shifting from old, legacy EdTech education systems to online EdTech alternatives. These schools are also adopting Artificial Intelligence to aid the grading of topics and proffering input. This means schools and universities can provide insightful solutions including AR, e-books, VR, interactive content, and University-approved online courses to the public for learning at personalized rates.





1

## **Spread of Other Significant Technology Factors**

The growth of the K-12 EdTech market is being catalyzed by the rapid increase of seamless internet access, smart gadgets, and the emergence of Augmented- and Virtual Reality. These would provide sufficient opportunities for the growth of the market via more interactive academic curricula. Gamification and other interactive classroom features are making EdTech flexible, easy, and scalable.

2

## **Increasing Awareness and Benefits Integration**

Over the pandemic, parents realized the need to provide learning tools for their kids and EdTechs emerged to fill the space with different solutions. Also, schools are integrating EdTech solutions into their processes including learning, enrolment, recruitment, connection, team management, end to end student lifecycle management. These solutions are making these processes more efficient and cost-effective.

3

## **Increasing Investments and Opportunities**

For the forecast period from 2021 through 2026, the Asia-Pacific region is projected to have the fastest growth. This is attributed to the growing quality of internet connectivity, surge in computing and small gadgets in countries like India. However, North America is expected to have the largest market share in the K-12 technology market. The region is predicted to be booming with lucrative opportunities for growth in the market due to the seamless flow of growing investments by private equity investors, venture capitalists, and the emergence of companies with higher investments and sales.



## 4

### **Proliferation of Education Apps**

Behind Business and Games, Education is the third most popular category on Google Play. This aligns with the trend of the increase in adoption and acceptance of other EdTech solutions and tools.

## 5

### **Accelerating Digital Instruction and Assessment**

Having to switch to remote learning posed challenges to learners, educators, and parents. To ascertain that learners are not left on the sidelines, the government keeps redefining access to education. There is more focus on infrastructures that will make remote learning seamless such as smoother internet connectivity, and innovation of better digital content for interaction, instruction and feedback.

With these, the demand for digital instruction and assessment in the K-12 market is expected to be dramatic. This is due to the wide acceptance of digital by educators, learners, and parents after the sudden shift from traditional, in-person instruction to remote learning by almost 1.3 billion learners in the K-12.



# CONCLUSION

As the whole K-12 market is expected to hit \$ 56490 Million by 2026, we see software vendors driving the chunk of the anticipated growth. With the significant tide and ebb of the COVID-19 pandemic, the educational organisations (academic sector) and even non-academic sectors are adopting educational technology software and requiring more urgent, remote, and personalised features. And educational organisations are mostly using software services for their Enterprise Resource Planning and Human Capital Management features.

The K-12 market is growing in Academic and Non-Academic sectors. This shows that more General technology companies in the market are expected to show more interest. The booming of the market is also expected to decrease employment in the market. However, learning and other K-12 processes would get more interactive and seamless.



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