

AR/VR IN EDUCATION: DEMAND FOR ENGAGING LEARNING EXPERIENCES DRIVE NEW TECHNOLOGIES INTO THE CLASSROOM

EDTECH UPDATE | Q3 - 2024



NAVAGANT



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A group of four people, two women and two men, are seated around a long wooden table in a modern office with large windows. They are all wearing white VR headsets and holding controllers, appearing to be engaged in a collaborative virtual reality experience. Laptops and papers are on the table.

AR/VR IN EDUCATION OVERVIEW

KEY SECTOR TAKEAWAYS

Navagant is pleased to share its latest AR/VR in Education report. Through our analysis of major trends in the AR/VR in Education industry and recent M&A transactions, we have identified several key trends below that highlight the future opportunity within the market.

1. The AR/VR in education sector is rapidly expanding, with the market projected to grow from \$2.5 billion in 2024 to \$24 billion in 2030 due to continuous technological innovation and increasing adoption.¹
2. Educational experiences are being transformed through AR/VR technologies, making learning more interactive and engaging by enabling immersive simulations and hands-on experiences across different educational levels.
3. Expected AR/VR funding in EdTech is set to lead with \$12.6 billion in 2025, emphasizing a shift towards personalized and accessible learning solutions driven by advancements like AI and mobile technology.²
4. The 2024 YTD M&A market for AR/VR in education has recorded 13 transactions with a median deal size of \$75.7 million, indicating a decrease from 2021 but continued interest due to technological advancements and favorable macroeconomic conditions.³

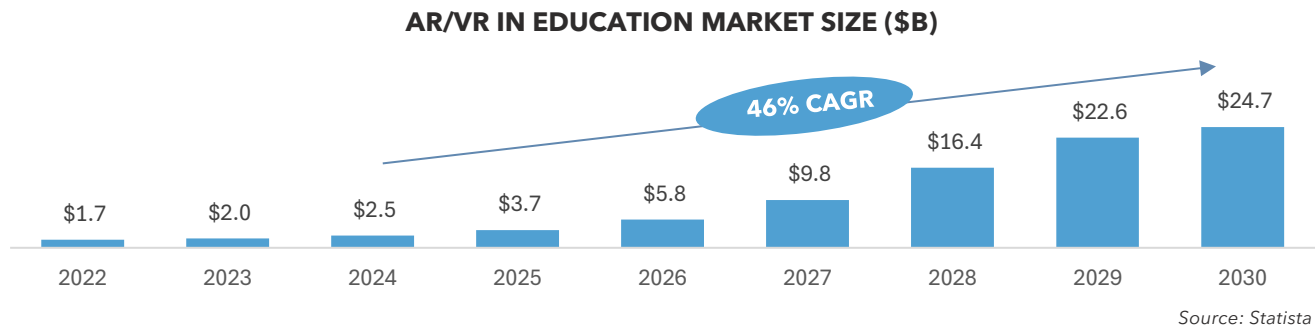
Navagant provides sell-side M&A advisory services including 100% sale, strategic partnership or recapitalization, management buyouts and corporate carveouts to our clients.

To learn more about Navagant's advisory services and AR/VR in Education industry expertise, please contact Navagant's [Jacob Voorhees](#), [Shawn Keenan](#), or [Whitt Larkin](#).

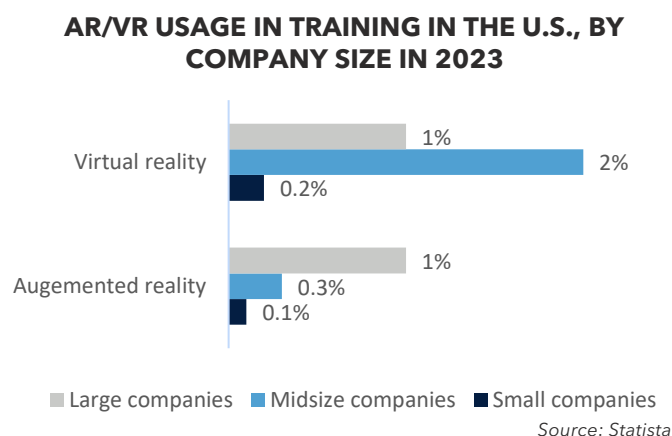
INDUSTRY AT A GLANCE

The integration of augmented and virtual reality (AR/VR) into educational environments signals a significant advancement in learning technologies. Initially, the use of AR/VR in education began over two decades ago with a goal to enhance traditional learning methods, like three-dimensional anatomy models. In the mid-2010s, there was a turning point in the industry, as more affordable and user-friendly VR headsets and AR applications led to broader acceptance and adoption in learning settings. Ultimately, these applications laid the framework for the current technologies used today that introduce new learning opportunities for all-students – K-12 up to corporate training.

The market for AR/VR in education is projected to grow at \$2.5 billion in 2024 to \$24 billion in 2030, representing an exceptional rate 46% growth rate.¹ One key factor driving the growth is that students and educators across all learning levels are increasingly seeking out unique educational solutions that allow users to interact with their learning, making it more enjoyable and engaging. Additionally, more recently, VR headsets and AR devices are becoming more accessible and affordable, making metaverse education more widespread. Lastly, there are diverse applications across growing fields, like in STEM education. However, there are still several factors that may restrain the market, including the initial investment being high for certain institutions with limited budgets, the technical challenges for schools without a dedicated IT staff and trained teachers, and the limited content libraries.



DEMAND FOR ENGAGING AND DIVERSE LEARNING EXPERIENCES



In the workplace, AR/VR offer innovative methods to make education more interactive. A recent survey of training formats revealed that 65% of employees found simulations to be the most engaging.⁴ Despite this, AR/VR are still not well integrated into workplace training. A survey of training methods by delivery shows that while AR/VR are commonly used, their overall adoption remains low among all sizes of companies.⁵ Ultimately, there is significant growth potential for companies to cater to this type of learning experience for employees across various workplace training sectors.

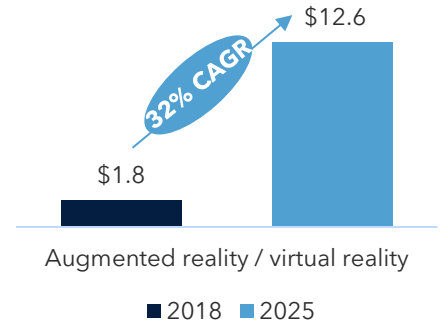
AR/VR technologies offer transformative learning experiences for both K-12 and higher education by enhancing accessibility and fostering immersive engagement. In K-12 settings, AR/VR can bring subjects to life, enabling students to explore ancient civilizations, dive into the human body, or witness scientific phenomena firsthand, making abstract concepts more tangible. In higher education, these technologies allow for advanced simulations, such as virtual surgeries for medical students, interactive laboratory experiments for science courses, and virtual field trips to remote or hazardous locations, providing practical, hands-on experiences that enhance learning outcomes. Increased investments in AR/VR will further improve accessibility and the quality of these educational tools.

GROWTH IN AR/VR FUNDING

The forecasted expenditure on advanced EdTech shows that AR/VR leads with \$12.6B in 2025.²

The integration of technology in education has indeed transformed learning experiences, emphasizing personalization and accessibility. Trends like personalized learning environments, AI-driven adaptive systems, and increased mobile accessibility are key drivers. These innovations aim to create equitable opportunities by offering customized learning experiences irrespective of location or socio-economic status.

FORCASTED EXPENDITURE ON ADVANCED EDTECH (\$B)



Source: Statista

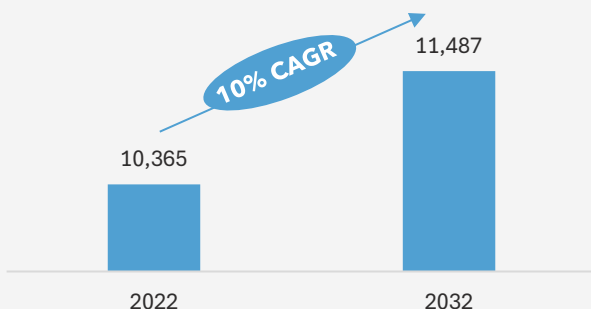
INCREASED EMPHASIS ON STEM EDUCATION AND CAREERS

Increased emphasis on STEM educations drives advancements in AR/VR technologies. These tools can be used at every level of STEM education: K-12 students can visualize geometry concepts with AR, university students can now do science labs with VR, and Emergency Medical Services can use VR in training and in practice. This growth is tied to the push for more effective learning experiences.

Building on this momentum, in 2022, the U.S. Department of Education announced the Raise the Bar: STEM Excellence for All Students Initiative aimed at enhancing STEM education for all students.⁶ This effort focuses on expanding access to high-quality STEM learning experiences and resources, particularly for underrepresented and underserved communities. With the support of \$120 billion dedicated to K-12 education in the American Rescue Plan and other federal education funds, the department has identified three goals for STEM education: a) ensure all students from PreK to higher education excel in rigorous, relevant, and joyful STEM learning; b) develop and support STEM educators to join, grow, and stay in the STEM field; c) invest in STEM education strategically and sufficiently using ARP and other federal, state, and local funds.⁶

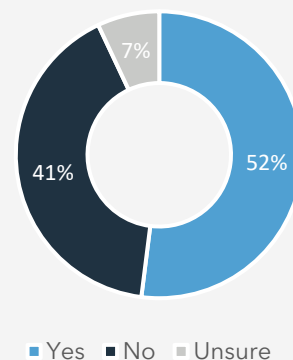
In addition to the federal push for STEM education, there is a rising interest in STEM-focused careers that currently use or has potential for using AR/VR for training or on-the-job purposes.. According to the Bureau of Labor Statistics, STEM professions are expected to grow at a rate of 10% by 2032, compared to 2% for all other professions.⁷ Currently, 41% of healthcare practices use VR.⁷ As interest in STEM careers grows, the demand for AR/VR tools will rise, making it essential to prepare students at all educational levels for these advanced technologies.

EMPLOYMENT GROWTH IN STEM PROFESSIONS (000s)



Source: BLS

DISTRIBUTION OF VR UTILIZATION IN HEALTH PRACTICES IN THE US IN 2023

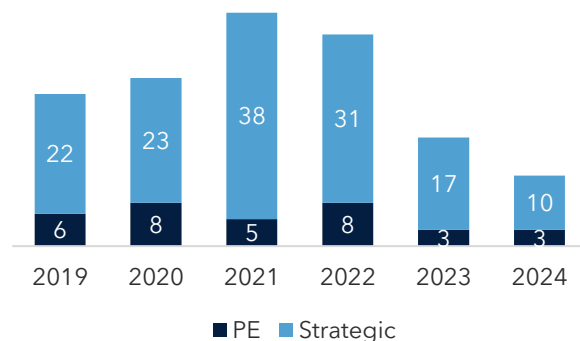


Source: Statista

AR/VR IN EDUCATION M&A OVERVIEW

In 2024 YTD, the AR/VR in education M&A market has seen 13 transactions with a median deal size of \$75.7 million for strategic buyers.³ While there are only a few published deal sizes for financial sponsors, they are on average larger. The decrease in deal volume compared to the peak in 2021 can be attributed to the earlier surge in edtech funding and pandemic-driven growth. However, the sector remains promising, strengthened by ongoing advancements in AR/VR technologies and supportive macroeconomic conditions that will drive up edtech funding. Strategic acquirers and private equity-backed add-ons are actively seeking opportunities, reflecting a sustained interest in integrating immersive technologies into educational environments.

AR/VR DEAL ACTIVITY



Source: Statista

MARKET MAP BY EDUCATION SEGMENT

K-12 & HIGHER EDUCATION



CORPORATE TRAINING



HEALTHCARE EDUCATION & TRAINING



ENGINEERING & SOFTWARE



NOTABLE TRANSACTIONS YTD



In June 2024, Street Smarts VR acquired ChimeraXR, a manufacturer of extended reality simulations serving defense and police departments for an undisclosed amount.⁸ This strategic acquisition strengthens Street Smarts VR's position as a frontrunner in tactical simulations and enhances its capabilities to serve the Canadian Department of National Defense, the Royal Canadian Mounted Police, and police services across Canada. The acquisition introduces advanced AR and MR technologies, allowing for immersive training experiences in existing environments, enhancing realism and relevance, and enabling high-intensity, XR-based content such as active shooter scenarios and Vehicle CQB (VCQB) training. The integration of AR, MR, and VR technologies within the unified platform further solidifies Street Smarts VR's position as the leading provider of comprehensive, immersive training solutions.



In May 2024, Calian Group acquired Mabway, a provider of AR/VR simulation and training services for the defense, maritime, and railway sectors, for CAD 41 million.¹⁰ Mabway specializes in large-scale defense role-playing simulations and technical engineering education for naval and maritime communities and has been a supplier to the British Army since 2012. The acquisition enhances Calian's military training capabilities, broadens its technological offerings, and expands its presence in the U.K. and Europe. This strategic move aligns with Calian's vision to become a premier global training partner, providing comprehensive and immersive learning solutions to military and defense customers worldwide.



In January 2024, Mastermind Cognitive Training, a provider of comprehensive cognitive performance training, was acquired by Crane Street Capital through an LBO for an undisclosed amount.⁹ Mastermind Cognitive Training started by enhancing athlete performance through cognitive training, recognizing its importance in professional sports. Now, they expanded to provide this training to athletes of all ages and skill levels, then further broadened their scope to include education, the aging population, business, military, and first responders. Their VR and tablet-based platforms offer self-guided, gamified, and adaptive cognitive training, benefiting various applications with comprehensive programs.

SELECT TRANSACTIONS

Deal Date	Target Company	Acquirer	Description	Valuation	Valuation / Revenue	EBITDA
18-Jul-2024	Intelligent Ultrasound	GE Healthcare	Developer of image analysis software designed to deliver a step change in the diagnostic value of medical ultrasound.	\$51.7	-	-
13-Jun-2024	ChimeraXR	Street Smarts VR	Manufacturer of extended reality simulations serving to defense and police departments.	-	-	-
12-Jun-2024	Pro-ficiency	Simulations Plus	Developer of tech-enabled training and compliance tools intended for clinical trial investigators and site staff.	\$100.0	6.7x	-
01-May-2024	Mabway	Calian Group	Provider of manpower, simulation, and training services intended to serve customers across the defense, maritime and railway sectors.	\$30.0	-	-
10-Apr-2024	GoRescue Brands	Safe Life	Provider of medical simulation training for organizations	-	-	-
19-Mar-2024	Talespin Reality Labs	Cornerstone OnDemand	Developer a virtual learning platform intended to serve healthcare, manufacturers, customer service representatives, and individual clients.	-	-	-
18-Mar-2024	JHT	Precise Systems	Offers virtual complex situational awareness training for the U.S. Department of Defense.			
16-Feb-2024	Elevate Health	Madison Industries	Developer of simulation-based education technologies intended for healthcare, aviation, defense and security sectors.	\$230.8	1.5x	-
15-Feb-2024	MedVR Education	National Board of Medical Examiners	Manufacturer of virtual reality products intended to serve the healthcare industry.	-	-	-
30-Nov-2023	DrazCanna	EV Electra	Provides virtual learning solutions to students and teachers worldwide.	\$981.4	-	-
11-Nov-2023	Hazard3	Safeware	Provider of emergency response training services.	-	-	-
15-Nov-2023	Paladin AI	TXT e-Solutions	Developer of a training platform designed to deliver data-driven pilot training.	-	-	-
23-Oct-2023	FlexSim Software Products	Autodesk	Provider of simulation software solutions for manufacturing, production, and assembly.	-	-	-
31-Aug-2023	Advanced IT Concepts	FVLCRUM	Provider of systems Integrator and compliance services intended for the federal government and the Department of Defense.	-	-	-
02-Aug-2023	Lifecast Body Simulation	3B Scientific	Developer of next-generation synthetic human and animal models based in Borehamwood, England.	-	-	-
24-Mar-2023	TacMed Solutions	CNL Strategic Capital, Levine Leichtman Capital Partners	Manufacturer of medical supplies and equipment designed for use in combat and tactical situations specifically for pre-hospital care.	\$104.0	-	-
15-Mar-2023	Jido	Roblox	Developer of augmented reality applications designed to facilitate digital content.	-	-	-

Source: Pitchbook

PUBLIC COMPANY DATA

\$USD in million

			Market Capitalization (\$)		LTM				EV / LTM (x)	
Company	Price 08/05/2024	% of 52-Wk High	Market Cap	Enterprise Value	Revenue	EBITDA	EBITDA Margin %	1-Year Rev. Growth	Revenue	EBITDA
ANSYS	\$296.54	81.4%	26,428	27,283	2,325	985	42%	7%	NM	27.7x
Autodesk	\$225.66	80.7%	50,358	52,913	5,645	2,025	36%	11%	9.4x	26.1x
Bentley Systems	\$44.82	78.4%	14,322	15,871	1,252	439	35%	10%	NM	36.2x
CAE	\$16.62	66.3%	5,272	7,263	3,174	681	21%	7%	2.3x	10.7x
Dassault Systems	\$36.00	68.0%	47,401	50,206	6,560	2,032	31%	4%	7.7x	24.7x
Graham Holdings	\$700.61	85.2%	3,102	4,224	4,616	618	13%	10%	0.9x	6.8x
Garmin	\$161.63	89.9%	31,671	31,762	5,648	1,553	27%	15%	5.6x	20.5x
L3 Harris Technologies	\$227.10	92.5%	43,397	54,557	20,765	4,029	19%	15%	2.6x	13.5x
Lockheed Martin	\$545.38	96.9%	130,382	147,847	71,069	10,642	15%	5%	2.1x	13.9x
Northrop Grumman	\$492.63	97.2%	72,016	87,694	40,764	4,635	11%	8%	2.2x	18.9x
NIIT	\$1.39	74.5%	186	187	39	9	23%	4%	4.8x	21.1x
Science Applications International	\$119.84	82.6%	6,242	8,411	7,263	645	9%	(6%)	1.2x	13.0x
Stride	\$71.21	93.2%	3,124	3,613	1,989	367	18%	10%	1.8x	9.8x
Science Applications International	\$119.84	82.6%	6,242	8,411	7,263	645	9%	(6%)	1.2x	13.0x
Textron	\$84.88	87.2%	16,104	19,621	13,897	1,707	12%	6%	1.4x	11.5x
Trimble	\$49.84	76.0%	12,540	15,196	3,799	1,010	27%	3%	4.0x	15.0x

Source: Pitchbook

NM = not meaningful

EV = enterprise value

LTM = last twelve months

	EV/Rev	EV/EBITDA
Mean	3.4x	17.7x
Median	2.3x	14.5x
Harmonic Mean	2.1x	14.7x

BUYER UNIVERSE


Navagant has followed buyers that have been highly acquisitive in the space as well as those that have completed notable AR/VR transactions. Navagant's industry expertise and network provides us with unique insights into this buyer universe such as the companies' industry and growth perspectives.

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- Fully Committed
- Honest & Transparent
- Industry focus
- Team-oriented Approach

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With over two decades of experience, Jacob is the Managing Director of Navagant, having been a key contributor since its inception. Leading as Managing Director and Co-Founder, he has played a vital role in establishing Navagant's strong brand presence, building relationships with clients and servicing them with integrity. Demonstrating a remarkable talent for deal-making and unwavering dedication to his clients, Jacob has earned recognition as a leader in various industries, most prominently the education and training industry. He began his career at Rabobank International and later focused on software and direct marketing industries with Andersen Corporate Finance LLC. Then, in 2003 he founded Capstone Partners and led their Education and Training Practice, until 2023 when he co-founded Navagant. As a highly accomplished leader, Jacob serves as an inspiring mentor and role model to the firm's up-and-coming professionals, further solidifying his significant contributions to the investment banking industry.

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ENDNOTES

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