

Edutainment's date with 'reality'

AR and VR apps are transforming education and entertainment for children in India

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American designer-writer Eric Carle published *The Very Hungry Caterpillar* in 1962. For starters, the book tells the story of a caterpillar who eats her way through a chain of fruits and veggies before becoming a pupa and emerging as a beautiful butterfly. The picture book for toddlers has sold about 50 million copies in more than 60 languages, igniting the imagination of millions of children. Recently, the book – which now enjoys a cult status among children and parents alike – made a move from the realm of fantasy to reality; augmented reality to be precise. The Very Hungry Caterpillar (TVHC) AR is in the first bouquet of augmented reality applications introduced on Apple's store in August.

The Pokemon way

StoryToys Entertainment, maker of TVHC AR, claims the game helps children stay connected to the real world even when they are playing in the digital world, as PokemonGo, an AR game from Nintendo, had recently demonstrated. Nintendo amassed more than a billion dollars in revenues from the AR game, which reportedly added about \$8 billion to the company's market cap. The PokemonGo craze set afire interest in AR/VR games across the globe, triggering several similar products that aim to create a three-dimensional real-world experience in a virtual world.

"That's what is so great about augmented reality games," beams

Amrita Chatterjee, Senior Manager, Strategic Alliances at Gurgaon-based startup Kompanions, which produces AR and virtual reality educational games for children. "They are unique in the sense that children can visualise things that they cannot otherwise see with naked eyes and build on their fantasy," she adds. Kompanions is one of the many companies in India trying to tap the growing market for AR edutainment games and apps. Globally, the sector (both AR and VR) is growing on a fast clip. Technology research firm IDC forecasts worldwide revenues for the AR/VR market to reach about \$14 billion this year. That's an increase of over 130 per cent from last year's \$6.1 billion. IDC thinks the market is skyrocketing at a compounded annual growth rate (CAGR) of 198 over 2015-2020 and will hit more than \$140 billion in 2020.

A different ballgame

That's a big pie and games and apps form a decent chunk of it. "AR and VR is a completely different ballgame," says Sushant Baliga, CEO of Bangalore-based SpectraVR Studios, which makes, among others, VR tools for real

estate developers. "We're tying up with about 100 schools in Mumbai to build VR/AR labs for them and create immersive educational experiences for children." Baliga says AR/VR tools can be a game-changer in education.

"I'm a skeptic on such games," says Jaya Bhattacharji Rose, a book reviewer and publishing consultant based in Delhi. "The issue with digital games is they restrict children's body movement and can make them stiff eventually. Several psychologists and teachers share this concern," she says.

But Kompanions' Chatterjee says AR/VR games offer an interactive, immersive experience that makes children explore activities multi-dimensionally. "These technologies are a fantastic learning tool," says Chatterjee. The scope for such applications goes well beyond the world of entertainment. She says AR/VR helps a great deal in teaching complex subjects, especially in science.

"For instance, if you want to teach young students how a combustion engine works, all you have to do is to get them to wear a VR google and launch the application," says Chatterjee. The children can personally experience the whole activity in 3D in real time and in an interactive fashion without having to visit a real factory or workshop. On that cue, such

technologies are great levellers. They help bridge the digital divide to some extent. "Suppose children in a school in South India wants to learn about the Taj Mahal," explains Baliga. "Not all schools and children can afford to take a tour to Agra and experience it. If they have access to an AR/VR system, they can experience virtually the whole building and premises and learn from that." Of course, this is no match for a real walk-through, but it helps augment the experience of the children.

And this is not an expensive affair any more. Thanks to advancements in technology, AR/VR hardware and software (such as goggles and apps) are now available in the market at affordable prices. A convenient VR goggle now costs only around ₹1,000. "You can only imagine what this can do to subjects like history and biology," says Chatterjee.

All this was not possible even five years ago. The advancements in VR/AR technologies and the warm reception they have received from players such as Apple, Google and HTC and from venture capital investors have really made an impact. For instance, companies under the Virtual Reality Venture Capital Alliance now have an estimated \$12 billion invested in digital reality.

Mobile phones such as Samsung Galaxy Note 8, Apple's iPhone X and Google's Pixels now fully support AR/VR applications. PokemonGo developer Niantic of Nintendo and Warner Bros Interactive Entertainment are now planning to introduce a Harry Potter AR game, which many expect to really augment interest in AR games for children.

