Unlocking the potential of virtual reality in the classroom

Yvonne Robertson February 12, 2018

ISB Students Experience Google Expeditions

ISBâ€™s Laura Brown has been finding ways to bring virtual reality into the classroom, inspiring curiosity and engagement amongst students.

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You've embarked on an expedition to Mount Everest. You are standing at base camp in temperatures well below zero. What part of your brain is responsible for regulating your body temperature?

The above scenario is only one of the experiences available using Google Expeditions, a virtual reality (VR) teaching tool. It was recently used in an International School of Beijing (ISB) high school psychology class, linking the experience back to the nervous system.

"Who would have considered an expedition to Everest could be used to meet the learning objectives, while providing students with a unique and immersive experience—in a high school psychology class!" says Laura Brown, a middle and high school education technology facilitator at ISB.

For the last year, Brown has been finding ways to take virtual reality from the gaming world and into the classroom, inspiring curiosity and engagement amongst students .

She recently ran a professional learning workshop at ISB to engage teachers in virtual and augmented reality.

"Virtual reality offers students the opportunity to step into worlds that you would never expect possible within the confines of a classroom," says Brown. "The immersive nature of the technology inspires curiosity, engagement, and a genuine interest in learning."

She hopes her session will encourage more teachers to consider integrating virtual reality into their curriculum, unlocking the vast potential of this relatively new technology.

The future of VR in the classroom

For Brown, the technology becomes an educational tool that offers a powerful learning experience. Students find themselves exposed to opportunities and interactions that would otherwise be impossible to replicate.

And the tool's reach is vast, extending across subjects and disciplines allowing teachers to engage it for any purpose, as the psychology teacher demonstrated for the Mount Everest expedition.

"There is a huge potential for students to really visualize their understanding and demonstrate and share their learning in an accessible and engaging way," says Brown. "There is also the potential for virtual reality to eventually impact all of the senses, rather than being limited to visual and audible, changing the experience from immersive to fully interactive. What that would mean for learning blows my mind!"

In the not-so-distant future, Brown sees students creating their own virtual reality content and sharing their learning through this content. An app called ThingLink is already providing students with an introduction of this kind.

Integrating a new reality

For teachers eager to start integrating virtual reality into their lesson plans, Brown recommends Google Expeditions as

a starting point. This application is specifically designed for educators and includes more than 700 expeditions, including the Great Barrier Reef, Mars, the Galapagos Islands, and a number of historical places and landmarks.

Google Expeditions also incorporates career expeditions, letting students witness first-hand what it's like to be a palaeontologist, pharmacist, park ranger, or—and probably one of the more popular ones—a food technologist paid to eat chocolate.

Each expedition comes with a discussion guide and script for teachers to use if they choose.

"Teachers should be sure to follow up the expedition with an opportunity for students to share their learning," says Brown. "In my experience, these opportunities have students buzzing. It is paramount that teachers capture the excitement while it is current."

Educators can seamlessly connect the learning tasks they design and integrate with virtual reality into the curriculum's learning objectives.

An educational tool for all ages

"The response from teachers and students has been nothing but positivity and excitement," says Brown. "I'm constantly amazed at the take up of information by students following a VR experience."

This positivity extends to students of all ages and types. Although recommended for upper elementary to high school, there are lesson plans and expeditions for younger ages as well.

All content comes with a recommended age as a guideline for educators.

"I have been pleasantly surprised at the level of engagement from students across the board," says Brown. "Those typically shy students, who prefer to engage more independently, have difficulty hiding their amazement when they find themselves in the shallows of the Great Barrier Reef surrounded by coral and schools of fish!"

Monitoring screen time

As with most things, virtual reality in the classroom is best in moderation and there are ways to combat the effects of screen time on young learners.

Lasting about 30 minutes per experience, using Google Expeditions provides educators ample time to follow up with a discussion and learning activity outside the realms of VR, and still within the typical 80 minutes of class time.

Whetting their appetite for sharing, virtual reality encourages students to remove their headsets and eagerly discuss what they learned with their classmates.

Brown also monitors students, particularly the younger ones, for dizziness or disorientation. Although relatively uncommon, she keeps iPads close at hand for students to take off their headset and switch to the less immersive iPad, if necessary.

This spring, Brown hopes to run a workshop for parents as well, providing them with the opportunity to participate in virtual reality in order to further their understanding of the technology.

"There is a need for our students to understand this media in order to create similar experiences to share their learning," says Brown. "Regardless of the outcome, it's our responsibility as educators to ensure we are preparing our students for the possibilities of tomorrow."

About International School of Beijing

The International School of Beijing offers an academically rigorous, balanced and engaging learning environment

enriched by being in China and strengthened by collaboration with parents and external partnerships. It cultivates inspirational and creative opportunities to develop each student's unique potential. It nurtures confidence and intellectual curiosity through experiential learning and innovative applications of knowledge and skills.

International School of Beijing

10 An Hua Street
Beijing, Shunyi District 101318
China
+86(10)81492345
JCole@isb.bj.edu.cn
https://www.isb.bj.edu.cn
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