Can Virtual Reality Revolutionise the way we Conduct Healthcare Market Research?

Given the powerful impact of VR/AR technology and its expanding applications within the healthcare industry, it is easy to imagine the many ways in which VR/AR can be utilised to develop, research, and evaluate product and service innovations. Instead of simply observing how respondents behave, pharmaceutical and MedTech companies now have the ability to understand the reasons why with greater clarity. VR/AR technology presents market researchers with an opportunity to study customers' behaviour in more depth than ever before and can provide insights that complement those gathered using traditional market research techniques, such as surveys and focus groups. The following examples are just some of the ways in which healthcare market researchers can leverage VR/AR to elicit deeper insights.

Device testing

Using immersive VR/AR technology it is possible to gain feedback on new product concepts, and identify what respondents like and dislike about medical devices earlier on in the development process than ever before. Instead of building and distributing full-scale prototypes to market research venues around the world at great expense, manufacturers can present new medical devices and design concepts with VR/AR using digital prototypes. Wearing headsets, respondents can see and handle the devices just as if the physical versions were in front of them. Respondents can then review the different design elements and give a comprehensive assessment of the product.

Usability testing of medical devices can also go beyond interaction with the device's interface. With VR/AR, market researchers have the ability to test the effects of using medical devices in real-world environments and use that information to predict future usability issues. For example, researchers can safety test the self-administration of insulin or epinephrine using auto-injector pens in a range of scenarios such as busy public spaces where there are crowds of people, loud noises and a variety of other distractions that might make it difficult to use the device safely and in the correct way. This rapidly growing technique for device testing is already being utilised by several pharmaceutical companies to streamline product design, enhance user experience research, save on development costs, and increase the overall quality of their products.

Projective research

One of the major drawbacks of using traditional market research methodologies is the inability to create a realistic test environment. Too often issues of cost or inconvenience place respondents in sterile and unimaginative central location facilities behind two-way mirrors, and not out in the real environments that bring needed context to the research. VR/AR technology can help researchers to overcome these barriers, lowering the operational costs while offering an almost real-world experience.

For example, VR/AR can be used to transport physicians into the lives of the patient – allowing them to experience their struggles to complete daily tasks whilst living with chronic conditions such as migraine, rheumatoid arthritis or diabetes. Using this type of VR/AR in market research can help build empathy by helping physician to understand their patients' lives and decision-making processes. Challenging physicians with the patients' perspective allows marketers to enrich their research into the patient experience and form a more comprehensive 360° picture of the patient journey, and highlight opportunities to improve outcomes.

Observational research

Instead of talking through people's memories of an experience after it has happened, market researchers often take an ethnographic approach by using observational techniques to understand behaviours as they happen in the real world. However, this can be a very lengthy, time consuming and often-impractical process. Where it is not feasible to observe respondents in this way, VR/AR provides researchers with the opportunity to closely emulate real-world experiences.

A key example of how this technique can be beneficial for pharma is in assessing the communication between healthcare practitioners (HCPs) and patients. By placing HCPs into a virtually simulated consultation room with a virtual patient voiced by an actor – or vice versa, researchers can act as a 'fly-on-the-wall' to observe the respondent's journey in real-time, see how they engage and interact in various scenarios, and collect detailed behavioural data.

Eye tracking

When incorporating eye tracking into VR/AR simulations, healthcare market researchers can achieve a more comprehensive view of a respondent's conscious and subconscious behaviour. While respondents may consciously interact with their virtual environment, their eye movements are involuntary. The ability to observe both behaviours, and see what involuntarily draws a respondent's eyes can provide invaluable insights for healthcare market researchers.

Enhancing traditional research methods

Market researchers can also enhance traditional methodologies such as surveys and focus groups if they incorporate VR/AR elements, or the principles of, into their study design. For example, VR/AR can be used as a creative way to increase response rates to quantitative surveys, which many market researchers will agree have been declining in recent years – leading them to seek out new ways of increasing engagement by following the principles of behavioural economic theory. One way this could work would involve interactive surveys appearing in mid-air while respondents wear a set of 'smart glasses'. Immersive research company Gorilla in the Room recently conducted a study into the use of VR/AR within a quantitative commercial survey. They found that the use of VR/AR significantly adds to the survey experience in terms of enjoyment and engagement. Over 40% of their respondents stated that they found the experience 'very enjoyable', compared to 25% of respondents who participated in a standard online survey. Their results suggest that the uniqueness of a VR/AR experience may help engage respondents in the survey process and combat declining response rates.

There are also several online research companies such as Click-room that offer virtual facilities for conducting focus groups with geographically dispersed respondents, giving market researchers, end-clients and other key stakeholders the opportunity to view the virtual focus groups live – much like a market research online community (MROC). While the platform is not exactly a traditional VR/AR experience, it allows respondents from around the world to meet as avatars in a virtual room where they can interact, build rapport with each other in their own time, and share their thoughts on a given topic. Much like MROCs, virtual focus groups are appealing to market researchers because they allow them to connect with respondents from around the world as well as hard-to-reach respondents such as patients with rare diseases. In addition, they lower the traditional recruitment and venue costs associated with conducting focus groups and they allow respondents to remain anonymous.

Conclusion

As exciting as these innovative research methods may seem, some questions remain. Firstly, how can we be sure that responses to computer-generated stimuli are natural, honest and unbiased? Although research into VR/AR suggests that people do tend to respond realistically to virtual events and situations, it also suggests that wearing headsets can cause physical effects such as increased heart rate and 'cyber sickness' – both of which may adversely affect respondents and their answers. This is especially concerning in healthcare market research where respondents may already be living with debilitating health conditions. Furthermore, when thinking about simulated consultations, can virtual simulations ever realistically replicate the subtleties of eye contact and other visual cues that occur when sitting face-to-face with another real-life person? Finally, will a potentially vulnerable patient feel as comfortable talking to a virtual physician as they would a real one? Perhaps as technologies advance, some of these obstacles will be removed, as the virtual reality becomes almost as authentic as the real one.

In conclusion, the inevitable arrival of more advanced VR/AR technologies is an exciting prospect and one that could revolutionise the way we conduct healthcare market research. Although VR/AR has yet to become part of mainstream market research, as the immersive quality of VR/AR reaches its full potential, familiarity will ensure that it is a common tool for the modern market researcher.

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