Relevance & Research Question

Virtual and Augmented Reality (VR/AR) have become more and more popular both in entertainment and workplace applications. Companies must learn which scenarios will be most assisted by either VR or AR in the future. However, user perceptions and willingness to utilize VR and AR in a work environment are important factors in the technology’s future development. Accordingly, the following research questions have been proposed:

- “How many users know what is behind the technology and are there any gender specific differences?”
- “Which work scenarios, when assisted by either VR or AR technology, are most probable from the user’s perspective?”
- “In what situations are users likely to adopt this new technology?”

Method & Data

A quantitative web survey was conducted which considered 15 different working situations where VR or AR could be deployed to assist the workforce.

Participants were asked to respond to questions with a 5-point Likert scale [1=least likely; 5=most likely]. Responses were then descriptively analysed.

Number of participants: 260
Average age: 30.75 (MD=28, SD=9.22)
Regional focus: Germany
Period of time: December 2017 – January 2018
Number of questions: 11 (including 15 scenarios)

Results of the Survey

Besides basic demographic data the key findings can be distinguished in the categories “Popularity and Interest”, “Virtual Reality”, and “Augmented Reality” scenarios.

Popularity and Interest:

- 71.15% of participants know both technologies. However, there is a huge gender specific difference (male 84,55% / female 56,45%) (fig. 1).
- 45.77% state a medium interest in VR/AR technology, but again there are differences between both sexes (male average: 3.53 / female: 2.85) (fig. 2).

Virtual Reality:

- Participants were asked, whether they could imagine an utilization of VR technology in the working environment (tab. 1) in a given scenario. Afterwards they were asked, whether they would use it, if the scenario becomes true in the future (tab 3+4).

Augmented Reality:

- Participants then were asked, whether they could imagine an utilization of AR technology in the working environment (tab. 5+6) in a given scenario. Afterwards they were asked, whether they would use it, if the scenario becomes true in the future (tab 7+8).

Summary and Conclusion

A recently published study from IDC shows, that the market for AR and VR will rise by 100% each year (IDC 2017). However, especially male participants of the questionnaire know what is behind virtual and augmented reality, but almost 30% of all participants do not know at all.

Moreover, higher average survey scores reveal that users view AR assisted scenarios as more likely to be used in a corporate context than VR.

Finally, the survey demonstrates relevant use cases and applications companies should focus on when developing technologies according to user preferences.

In summary, the conclusion and recommendations are:

- The gender specific difference of knowledge about new technologies must be closed by raising women’s awareness for VR and AR. Special training events or mentoring programs for qualified women should be even more in focus.
- Training and training simulators seem to be most important scenarios with both technologies, as well as visiting exhibitions, so companies should support these scenarios by VR/AR.
- Regarding user’s preferences, companies should find a way to support presentations and editing of media files with the help of VR and research assistance with the help of AR.

References


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