

Abgabe Arbeitsblatt 2

Gruppe F

Thema 38 Virtual Reality Training

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Aufgabe 1: Snowballing-Suche

Vorgegebener Artikel [1]. Forward snowballing: Keine relevanten Zitationen. Backward snowballing: Insgesamt werden 32 Quellen Zitiert. Folgende sind relevant für unser Thema: [2],[3],[4]

Aufgabe 2: Suchtermbasierte Suche

RQ1

Bei welchen Systemen lässt sich VR Training effektiv einsetzen? (Raschpichler)

Suchterm: Survey AND usage AND Virtual Reality AND training AND astronauts AND effectiveness

Suchquellen: Google Scholar

RQ2

Welche Hardware wird für VR Training benutzt? (Psenicka)

Suchterm: hardware AND (vr OR virtual reality) AND train AND astronaut

Suchquellen: Google Scholar

RQ3

Wie effektiv ist VR Training im Vergleich mit anderen Trainingsmethoden? (Specic)

Suchterm: Vr AND Training AND review AND training methods AND effectiveness AND astronauts AND usability

Suchquelle: Google Scholar

RQ4

Wie beeinflusst VR Training das Verhalten und die Gesundheit?(Dinh)

Suchterm: virtual reality AND training AND astronauts AND health

Suchquelle: Google Scholar

Forschungsfrage	Suchort	Suchdatum	Suchbesch ränkungen	Exakte Suchanfrage	Anzahl der Ergebnisse	Anzahl relevante Ergebnisse	Verwendete Treffer
RQ1	Google Scholar	27.10.2023	seit 2023, Zitate und Patente ausgeschlo ssen	Survey AND usage AND Virtual Reality AND training AND astronauts AND effectiveness	2.080	2	[5],[6]
RQ2	scholar	27.10.23	seit 2020	hardware AND (vr OR virtual reality) AND state-of-the-art	2.640	10	[7], [9],
RQ3	Google Scholar	27.10.23	seit 2022	Vr AND Training AND review AND training methods AND effectiveness AND astronauts AND usability	1450	3	[8], [10], [6]

RQ4	Google Scholar	27.10.23	seit 2023	virtual reality AND training AND astronauts AND health	1900	2	[11], [12]
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[2] Holt, S., 2022. Virtual reality, augmented reality and mixed reality: For astronaut mental health; and space tourism, education and outreach. *Acta Astronautica*.

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[4] Aguilar Reyes, C.I., Wozniak, D., Ham, A. and Zahabi, M., 2023. Design and evaluation of an adaptive virtual reality training system. *Virtual Reality*, 27(3), pp.2509-2528.

[5] Verniani, A., 2023. *Automated Individually-Adaptive Astronaut Training Algorithms in Virtual Reality for Deep Space Missions* (Doctoral dissertation, University of Colorado at Boulder).

[6] Weiss, H. and Stirling, L., 2023, March. Usability Evaluation of an Augmented Reality Sensorimotor Assessment Tool for Astronauts. In *2023 IEEE Aerospace Conference* (pp. 1-13). IEEE.

- [7] McHenry, N., Hunt, T., Young, W., Gardner, A., Bhagavatula, U., Bontz, B., Chiu, J., Chamitoff, G. and Diaz-Artiles, A., 2020. Evaluation of pre-flight and on orbit training methods utilizing virtual reality. In *AIAA Scitech 2020 Forum* (p. 0168).
- [8] Sun, Qingwei, et al. "Smart Task Assistance in Mixed Reality for Astronauts." *Sensors* 23.9 (2023): 4344.
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- [10] Wahsh, Muntasser A., and Zainab M. Hussain. "A systematic literature review of using virtual reality in laboratory education." *AIP Conference Proceedings*. Vol. 2839. No. 1. AIP Publishing, 2023.
- [11] Koleva, N. (2023). *Replicating Aspects of the Overview Effect Using Virtual Reality* (Doctoral dissertation, Webster University).
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