

Technology hypes, technology design, adoption in practice and sustainability – A practice-based perspective

C. Kunze

Kunze (2020). *Gerontechnology* 19(Suppl); <https://doi.org/10.4017/gt.2020.19.s.70118.4>

Purpose Despite considerable efforts in research and the design of technologies to support elders, the “quality-of-life technologies” uptake in practice is very low and a digital gap still exists for internet service usage, putting the very old and people with disabilities at a disadvantage. One reason for this unsatisfactory impact of digital technologies lies in the frequent bias of research regarding the appropriate level of technology (ALT). **Method** With the NASSS framework (Greenhalgh et al., 2017) as a theoretical foundation, the ALT impact is analyzed and exemplified by three case studies: reminiscence therapy (Bejan et al., 2018), care collaboration (Renyi et al., 2018), dementia care in acute hospitals. **Results & Discussion** Two typical disorientations in gerontechnology are identifiable: 1) Research on technologies that support elders’ autonomy and participation often focus on emerging technologies, such as robotics or AI. These “hyped” technologies undoubtedly have large long-term potentials for promoting social participation. However, their actual technical capacity is frequently overestimated, while the complexity of embedding technologies in practical contexts and social structures oversimplified. This is problematic since underestimated complexity constitutes a main reason for non-adoption as well as a common challenge to scale-up and to the sustainability of health and social care technologies (Greenhalgh et al., 2018). An orientation towards technology hypes conceals concrete opportunities as well as the needs for action to support simple and mature digital technologies’ usage. 2) Similarly, research often stresses the development and evaluation of specific assistive technologies, while the potentials of mainstream-technology-based socio-technical arrangements for participation are neglected (Gómez, 2015). Strongly needed are investigations on social innovations that promote digital literacy and empower adults in digital use (e.g. smartphones, elder-need-adapted mobile applications). This way, shifts in gerontechnology towards technology appropriation and adoption or the up-scaling and sustainable implementation of technology-based interventions are realizable.

References

- Bejan, A., Gündogdu, R., Butz, K., Müller, N., Kunze, C., & König, P. (2018). Using multimedia information and communication technology (ICT) to provide added value to reminiscence therapy for people with dementia. *Zeitschrift für Gerontologie und Geriatrie*, 51(1), 9-15.
- Gómez, D. L. (2015). Little arrangements that matter. Rethinking autonomy-enabling innovations for later life. *Technological forecasting and social change*, 93, 91-101.
- Greenhalgh, T., Wherton, J., Papoutsis, C., Lynch, J., Hughes, G., Hinder, S., Shaw, S. (2017). Beyond adoption: a new framework for theorizing and evaluating nonadoption, abandonment, and challenges to the scale-up, spread, and sustainability of health and care technologies. *Journal of Medical Internet Research*, 19(11), e367.
- Greenhalgh, T., Wherton, J., Papoutsis, C., Lynch, J., Hughes, G., Hinder, S., Shaw, S. (2018). Analysing the role of complexity in explaining the fortunes of technology programmes: empirical application of the NASSS framework. *BMC Medicine*, 16(1), 66.
- Renyi, M., Teuteberg, F., & Kunze, C. (2018, July). ICT-based support for the collaboration of formal and informal caregivers—a user-centered design study. In *International Conference on Business Information Systems* (pp. 400-411). Cham: Springer.

Keywords: technology adoption, socio-technical environments

Address: Laboratory for Care & Technology, Furtwangen University, FRG

Email: kuc@hs-furtwangen.de